# SUPPLEMENT.

# e Itliming Immal.

AND COMMERCIA

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES. The MINING JOURNAL is Registered at the General Poet Office as a Newspaper, and for Transmission Abroad.]

172.-Vol. XLVII.

LONDON, SATURDAY, APRIL 7, 1877.

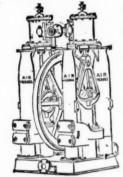
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SPECIALITIES ARE ALL SIZES OF

Pumps, Shipbuilders' Tools,

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Represented by Model exhibited by this Firm.

HARVEY AND CO. NEERS AND GENERAL MERCHANTS. HAYLE, CORNWALL,

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MANUFACTURERS OF Sand other LAND ENGINES and MARINE STEAM ENGINES agest and most approved kinds in use, SUGAR MACHINERY, ORK, MINING MACHINERY, AND MACHINERY IN GR-. 8HIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF AND'S PATENT PNEUMATIC STAMPS.

NDHAND MINING MACHINERY FOR SALE,

IN GOOD CONDITION, AT MODERATE PRICES-viz ENGINES: WINDING ENGINES: STAMPING ENGINES: CAPSTANS: ORE CRUSHERS: BOILERS and PITWORK of sizes and descriptions; and all kinds of MATERIALB required for G PURPOSES.

LYON & DAVISON,

NFOUNDERS, ENGINEERS, &c., on Bridge, near NEWCASTLE-ON-TYNE,

Manufacturers of IELTING, REDUCING, AND REFINING FURNACES, AG HEARTHS, AND SMELTERS' WORK GEAR. d Estimates furnished for improved Lead or Copper Mining and Smelting Plant.

# AWRENCE ROPE WORKS,

NEWCASTLE-ON-TYNE. Established 1782.

OMAS AND WILLIAM SMITH,

of all kinds of Iron; Steel, Copper, and Galvanised Wire Ropes; leading Ropes, &c.; Round and Flat Shaft Ropes; Crab Ropes; Gnide Ropes; and Galvanised Signal Strand; Ship's Standing Rigging: Patent Hemp and Manilla Hawwers, Warps, Cordage, Spun-yarn, la Yarn for Telegraph Cables, and Flat Hemp Ropes for Driving lough Ropes; Fencing Wire and Stand Lightning Conductors, &c.

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#### NDARD LUBRICATING OILS COMPANY, LIMITED.

nd PALE OILS for MACHINERY, RAILWAY, and MINING from TWO SHILLINGS per gallon, and upwards. AGENTS WANTED.

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NETTS' SAFETY FUSE WORKS, ROSKEAR, CAMBORNE, CORNWALL.

NG FUSE FOR MINING AND ENGINEERING PURPOSES,

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ETTS, having had many years experience as chief engineer with and Co., is now enabled to offer Fuse of every "ariety of facture, of best quality, and at moderate prices, and Sample Cards may be had on application at the above address. OFFICE,—H. HUGHES, Esq., 95, GRACECHURCH STREET.







PARIS, ORDER OF THE CROWN OF PRUSSIA. FALMOUTH, BRONZE MEDAL, 1867. SILVER MEDAL, 1867

A DIPLOMA-HIGHEST OF ALL AWARDS-given by the Geographical Congress, Paris, 1875-M. Favre, Contractor, having exhibited the McKean Drill alone as the Model Boring Machine for the St. GOTHARD TUNNEL.

SILVER MEDAL of the Highland and West of Scotland Agricultural Society, 1875—HIGHEST AWARD.

At the south end of the St. Gothard Tunnel, where

Are exclusively used, the advance made during eight consecutive weeks, ending February 7, was  $24\cdot90,\ 27\cdot60,\ 24\cdot80,\ 26\cdot10,\ 28\cdot30,\ 27\cdot10,\ 28\cdot40,\ 28\cdot70$  metres. Total advance of south heading during January was 121.30 metres, or 133 yards.

In a series of comparative trials made at the St. Gothard Tunnel, the McKean Rock Drill continued to work until the pressure was reduced to one-half atmosphere (7½ lbs.), showing almost the entire motive force to be available for the blow against the rock—a result of itself indicating many advantages.

The GREAT WESTERN RAILWAY has adopted these Machines for the SEVERN TUNNEL; the LONDON AND NORTH-WESTERN RAILWAY for the FESTINIOG TUN-NEL: and the BRITISH GOVERNMENT for several Public Works. A considerable number of Mining Companies are now using them. Shafts and Galleries are driven at from three to six times the speed of hand labour, according to the size and number of machines employed, and with important saving in cost. The ratio of advantage over hand labour is greatest where the rock is hardest.

These Machines possess many advantages, which give them a value unapproached by any other system of Boring Machine.

THE MCKEAN ROCK DRILL IS ATTAINING GENERAL USE THROUGHOUT THE WORLD FOR MINING, TUN-NELLING, QUARRYING, AND SUB-MARINE BORING.

The McKEAN ROCK DRILLS are the most powerful—the most portable-the most durable-the most compact-of the best mechanical device. They contain the fewest parts-have no weak parts-act without shock upon any of the operating parts-work with a lower pressure than any other Rock Drill-may be worked at a higher pressure than any other -may be run with safety to FIFTEEN HUNDRED STROKES PER MINUTE-do not require a mechanic to work them-are the smallest, shortest, and lightest of all machines-will give the longest feed without change of tool-work with long or short stroke at pleasure of operator.

The SAME Machine may be used for sinking, drifting, or open work. Their working parts are best protected against grit and accidents. The various methods of mounting them are the most efficient.

N.B.-Correspondents should state particulars as to character of work in hand in writing us for information, on receipt of which a special definite answer, with reference to our full illustrated catalogue, will be sent.

PORTABLE BOILERS, AIR COMPRESSORS, BORING STEEL, IRON, AND FLEXIBLE TUBING.

The McKean Drill may be seen in operation daily in London.

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ENGINEERS.

OFFICES, 42 BOROUGH ROAD, LONDON, S.E.; and 5, RUE SCRIBE, PARIS.

MANUFACTURED FOR MCKEAN AND CO. BY MRSSRS. P. AND W MACLELLAN, "CLUTHA IRONWORKS," GLASGOW.

# The Warsop Rock Drill

(Involving an entirely new principle in Mechanical Boring)

Requires only 20 lbs. steam or air-pressure.

Has only two moving parts—thus ensuring freedom from de-rangement, and is absolutely self-feeding.

Is excessively light, and can be carried by one man, who can with the No. 1 size (weighing only 35 lbs.) drill 40 holes in diameter and light in deep per minute, in the hardest Aberdeen granite for splitting purposes.

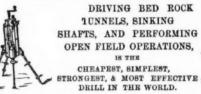
# WARSOP AND HILL, HYDRAULIC AND GENERAL ENGINEERS.

NOTTINGHAM.

STEAM and HYDRAULIC WINDING and PUMPING RNGINES of all kinds.

#### **DUNN'S** ROCK DRILL,

AIR COMPRESSORS. DRIVING BED ROCK





OFFICE,-193, GOSWELL ROAD (W. W. DUNN AND CO.),

LONDON, E.C.

## PATENT SELF-ACTING MINERAL DRESSING MACHINE COMPANY

T. CURRIE GREGORY, C.E., F.G.S.

OFFICES,-GLASGOW: 150, ST. VINCENT STREET. LONDON: 85, GRACECHURCH STREET, E.C.

IMPORTANT NOTICE TO MINE PROPRIETORS.

MR. GEORGE GREEN, ENGINEER, ABERYSTWITH, SUPPLIES MACHINES under the above Company's Patents for DRESSING all METALLIC ORES. Dressing-floors having these Machines pos-1.-THEY ARE CHEAPER THAN ANY OTHER KIND IN FIRST OUTLAY.

2.—ONLY ABOUT ONE-FOURTH OF THE SPACE USUALLY OCCUPIED BY DRESSING-FLOORS IS REQUIRED. A .- FROM 60 TO 70 PER CENT. OF THE LABOUR IN DRESSING, AND

FROM 5 TO 10 PER CENT. OF ORE OTHERWISE LOST, IS SAVED. 4.—THEY ARE THE ONLY MACHINES THAT MAKE THE ORE CLEAR

FOR MARKET AT ONE OPERATION. They have been supplied to some of the principal mines in the United Kingdo and abroad—viz...

and abroad—viz.,

The Greenside Mines, Patterdale, Cumberland; London Lead Company's Mines
Darlington, Colberry, Nanthead, and Bollyhope; the Stonecroft and Greyside
Mines, Hexham, Northumberland; Wanlockhead Mines, Abington, Scotland (the
Duke of Buceleush's); Bewick Partners, Haydon Bridge; the Old Darven, Esgairmwyn, and Ystumtuen Mines, in Cardiganshire; Mr. Beaumont's W.B. Mines,
Darlington; Islos Mr. Sewell, for Argentiferous Copper Mines, Peru; the Braisberg Copper Mines, Norway, and Mines in Italy, Germany, United States of
America, and Australia, from all of whom certificates of the complete efficiency of
the system can be had.

WASTE HEAPS, consisting of refuse chats and skimpings of a ormer washing, containing a mixture of lead, blende, and sulpher, DRESSED TO A PROFIT.

Mr. Bainbridge, C.E., of the London Company's Mines, Middletonin Tessdale, by Darlington, writing on the 20th March, 1876, says—"The yearly
profit on our Nainthead waste heaps amounted last year to £800, besides the machirery being occupied for some months in dressing ore-stuff from the mines. Of
course, if it had been wholly engaged in dressing wastes our returns would have
been greater; but it is giving us every satisfaction, and bringing the waste heaps
into profitable use, which would otherwise remain dormant."

Mr. T. B. Stewart, Manager of the Duke of Buccleuch's Mines, Wanlockhead, Abington, N.B., writing on 20th March, 1876, says—"I have much pleasure in stating that a full and superiorset of your Ore Dressing Machinery has been at work at these mines for fully a month, and each day as the moving partie become smoother, and those in charge understand the working of the machinery better, it gives increasing satisfaction, the ore being dressed more quickly, cheaply, and satisfactorily than by any other method."

Mr. BAINBRIDGE, speaking of machinery supplied Colberry Mines, says—"Your machinery saves fully one-half on old wages, and vastly more on the wages we have now to pay. Over and above the saving in cost is the saving in one, which is a Lt much short of 10 per cent."

GREENSIDE MINE COMPANY, Patterdale, near Penrith, say-" The

Mr. Montague Beale says—"It will separate ore, however close to mechanical mixture, in such a way as no other machines can do."

Mr. C. Dodsworth says—"It is the very best for the parpose ad will do for any kind of metallic ores—the very thing so long needed for dress-

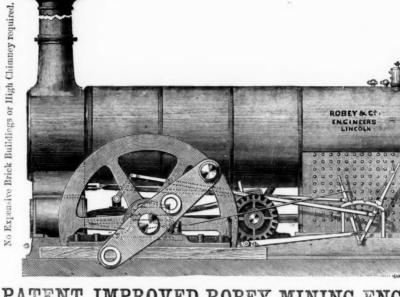
Drawings, specifications, and estimates will be forwarded on application to-

GEORGE GREEN, M.E., ABERYSTWITH SOUTH WALES.

# ENGINEERS, LINCOLN, ROBEY



THE PATENT ROBEY FIXED ENGINE AND LOCOMOTIVE BOILER COMBINED,



PATENT IMPROVED ROBEY MINING ENGINE,

OF ALL SIZES, FROM 4 TO 50-HORSE POWER.

Some of the advantages of this New Engine are as follows:—

SMALL FIRST COST. SAVING OF TIME AND EXPENSE IN ERECTING. EASE, SAFETY,

AND ECONOMY IN WORKING. GREAT SAVING IN FUEL.

This New Engine is free from all the objections that can be urged against using the Semi-Portable Engine for permanent work, because it possesses the rigidity and durability of the Horizontal Engine, and at the same time retains the advantages of the Semi-Portable in saving time and expense in fixing.

#### THE PATENT ROBEY FIXED ENGINE

(Also above illustrated) is admirably adapted for driving Rolling Mills, Saw Mills, Brick Machinery, Pumping Machinery, and all descriptions of Fixed Machinery.

ENGINES UP TO 200 EFFECTIVE HORSE-POWER ALWAYS IN PROGRESS.

Prices and full particulars of all the Machinery here illustrated on upplication to the Sole Manufacturers,

# ROBEY & CO.,

ENGINEERS, LINCOLN, ENGLAND.

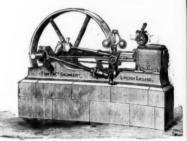
London Office: 117, Cannon Street, London, E.C.



SELF-ACTING CIRCULAR SAW BENCH



PATENT VERTICAL BOILERS, 2 to 12 horse power



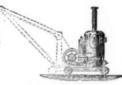
IMPROVED HORIZONTAL FIXED STEAM

(PRIZE MEDAL, INTERNATIONAL EXHIBITION.)

ALWAYS ON STOCK OR IN PROGRESS.



SUPERIOR PORTABLE ENGINES, 4 to 50-horse power.











Parties are cautioned against using or purchasing imitations or infringements of these patent manufactures.

PATENTEES AND SOLE MANUFACTURERS,

ALEXANDER CHAPLIN AND CO., CRANSTON HILL ENGINE WORKS, GLASGOW.

London House: M'KENDRICK, BALL, AND CO., 63, Queen Victoria-street, London, E.C.

HADFIELD'S Steel Colliery Wheels, PATENT FITTED AXLES. Self-oiling
Pedestals or
Cods
(PATENTED),
Cage Guides,
Incline Rollers
and Pulleys,
arrow Wheels,

TO COLLIERY PROPRIETORS, MINING ENGINEERS, &c.

Hadfield's Steel Foundry Company. MANUFACTURERS OF EVERY DESCRIPTION OF CRUCIBLE CAST STEEL CASTINGS.

ATTERCLIFFE, SHEFFIELD.

#### THE DIAMOND BORING COMPANY ROCK

CONTRACTORS, ARTESIAN WELL BORERS, AND SINKERS.

GOLD MEDAL FOR ROCK BORING MACHINERY ...... EXHIBITION, 1873.

SILVER MEDAL , ..... FALMOUTH, 1875.

This company now undertake the sinking of Artesian Wells. Their system rivals all others, both for efficiency and speed in addition produces "Solid Cores" from the Rocks bored through, thus giving invaluable evidence of the strata passed through as the work progresses .- Vide Brewers' Journal, Cctober, 1876, and other papers.

OFFICES,—2, WESTMINSTER CHAMBERS, LONDON, S.W.

#### COAL-CUTTING MACHINERY.

W. and S. FIRTH undertake to CUT, economically, the hardest CANNEL, ANTHRACITE, SHALE, or ORDINARY COAL, ANY DEPTH, UP TO FIVE FEET.

16, YORK PLACE, LEEDS.

# Original Correspondence.

ROCK DRILLS.

ROCK DRILLS.

Sign.—If agreeable to any of your correspondents, I should be glad know to what extent the rock-drill is used in Cornwall in driving less or headings. Also, as there are more than a dozen rock-drills sels or headings. Also, as there are more than a dozen rock-drills own to the mining public, and used in tunnelling, quarry work, own to the mining public, and used in tunnelling, quarry work, which particular one is found to be best adapted for mining the second process, driving stone drifts or levels in sandstone, hard shale, or poses, driving stone drifts or levels in sandstone, hard shale, or poses, driving stone drifts over hand labour. The wear inte, and the advantage it affords over hand labour. The wear it are of these machines generally is very great. One machine is dead to have only 42 working parts about it; from this we may ted to have only 42 working parts about it; from this we may ted to have only 42 working parts about it; from this we may ted to have only 42 working parts about it; from this we may it is as an advantage in this respect over others. These seem be two great hindrances to their general introduction into mines. be two great hindrances to their general introduction into mines. be two great hindrances to their general introduction into mines. be two great hindrances to their general introduction into mines. be two great hindrances to their general introduction into mines. be two great hindrances to their general introduction into mines. Begins of the second of the s

leight (intended) of the Hoosac tunnel, in America, and the Hoosac tunnel, in America, and the Horizen to the present time, the rate of progression in 24 hours, the machinery used in driving the tunnel.

M. E.

astle on-Tyne, April 4.

WASTE OF SMALL COAL-PATENT FUEL-No. III.

WASTE OF SMALL COAL—PATENT FUEL—No. III.

SR,—Fuel commends itself to shipowners and charterers of vesta, whom economy in space is most important. This advantage, will be admitted, is great when it is borne in mind that I ton of will be admitted, is great when it is borne in mind that I ton of ell-compressed fuel—such, for instance, as is made by Mr. Hamel's elecase with Messre. Clayton and Co.'s press—occupies only 30 cubic to space, whereas I ton of coal occupies from 42 to 50. A furst advantage results from the fact that a cargo of fuel, being easily advantage results from the fact that a cargo of fuel, being easily advantage rosults from the fact that a cargo of fuel, being easily as absolute of sustain dumage from leakage of the ship. The economy of well-made fuel deserves notice here. (Not mere mess applies to price also in favour of fuel.) If fuel can be had easily a character that, as regards space, though this in a cermineness applies to price also in favour of fuel.) If fuel can be had stowage room. That such may be case I would refer to the sagans Mr. W. R. Huntley, a highly intelligent and prosperous coal archart of Greenwich, of some 40 years standing there. His acute-sand experience soon discovered the value of the Metropolitan beat fuel. Having tried it and satisfied himself he at once began and experience soon discovered the value of the Metropolitan get Fuel. Having tried it and satisfied himself he at once began induces it largely in the vicinity of London. For example, he to the South Metropolitan Schools, at Sutton, 20 tons on trial, the result connot be better stated than by the report of the suinsteaded to Dec. 20 last, addressed to Mr. T. R. Huntley, brother the former, and a member of the administrating committee, and the state of the

ich it will be observed is countersigned by the engineer. The rethis stellows:

South Metropolitan School, Sutton, Surrey, Dec. 20, 1876.

LISSE,—I have much pleasure in forwarding to you the result of certain princes we have been making here in our furnaces with the patent fuel you recommended for our adoption. We have had it in use for some weeks, and a rey careful test the following is the result of two weeks' work:

First week—North Country Steam coal... 5 tons 16 certs.

Seado week—Metropolitan Patent Fuel ... 3 tons 5 certs.

addition to this saving in weight and cost of fuel the following additional magas wold still further reduce the outlay:

1.—The sanks of ten a great nuisance, in spite of patent doors, &c., is very

L-The shire reduced to a minimum.

L-The shire reduced to a minimum.

L-The shire reduced to a great nuisance, in spite of patent doors, &c., is very considerably lessence.

L-As the patent fuel requires little or no stoking there is a saving of quite Sper cent. In the labour.

Ten areal liberty to make any use your please of this letter.

THOMAS HALES, Superintendent.

THOMAS HALES, Superintendent.

ctical result of this report is that it was followed by ler for 200 tons of the same fuel, and I hear that satisfaction

on the increase, Softcontent with this Mr. Huntley determined to bring fuel of is character within easy reach of all in the vicinity of London who ght be disposed to test its value, and avail themselves of its use. to this purpose and to avoid the heavy expense of freight from the mote works of Briton Ferry, he gave to me the benefit of his long merience in business, and offered me convenient premises on his property at Greenwich for the erection of machinery to manuscure fuel under Mr. Hamel's patent. I availed myself of the offer. Messy, Clayton and Co. have supplied the requisite press and chinery. This factory has been at work for some time, and the has given great satisfaction to the consumers. Amongst the r may be mentioned the proprietors of the steam-tug Victor

see engineer reports as follows:—

See engineer reports as follows:—

Seem tag Vactor, on the Thames, Feb. 9, 1877.

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n for nuisance under the Smoke Consuming Act prosecution for nusance under the Smoke Consuming Act.

we comes the very important question of the exemption from
lability to explosion and spontaneous combustion by the use of
nt fuel and other incidental considerations. This branch of the
set cannot be more forcibly elucidated than by reference to the
ished report of the Royal Commission appointed to enquire into
suses of spontaneous combustion in ships laden with coals, and
le observations I made in your valuable, pages, and which cane. dauses of spontaneous combustion in ships laden with coars, the observations I made in your valuable paper, and which can

and of either process or machinery for the manufacture of fuel, lay be interesting just as a passing remark to observe that a reset of his, the Countesse de Hamel, whose family was one of those oduring the Reign of Terror in France was proscribed, whose posterior of the process of the proce the system, she consulted Mr. Hamel. He applied himself to testing the defective and recover the loss sustained. Finding the defective mery was one cause of the subject with a view to attain success instead lure, and recover the loss sustained. Finding the defective miths chiner, and recover the loss sustained. Finding the defective achieve was one cause of failure he set himself to work, with a strait talent for engineering, to invent a press, and succeeded to a brack. There are two magnificent specimens of his invention now work at Briton Ferry. He next proceeded to improve the proceeded to improve the proceeded exhibited themselves in the various known systems, and in a succeeded admirably. Having had the conduct for any years of the Board of Trade enquiries into the causes of loss and the conduct for the series of the Board of Trade enquiries into the causes of loss and the conduct for the cause of the Board of Trade enquiries into the causes of loss and the causes of loss and the cause of loss and the

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else to what the losses by explosion or spontaneous combustion were attributable, and it became an important study with him how to avert such calamities, and hence the importance of the observations already quoted on that very subject, and the value of Mr. Hamel's Lloyd's, Royal Exchange, April 3.

A SHAREHOLDER. Lloyd's, Royal Exchange, April 3.

process, which provides a remedy for such disasters.

Terminating this subject, I may add that one of the best specimens of pitch-made fuel I ever saw in South Wales or anywhere else was made by the Cambrian Patent Fuel Company of Cardiff. Mesers. Burgess, Shaddick, and Co., one of the best exporting firms in the Principality, are largely interested in that manufacture, and I am glad to have the opportunity of your medium to tender them my thanks publicly for the readiness with which they explained to me thanks publicly for the readiness with which they explained to me the process followed by the Cambrian Fuel Company.

Old Vicarage House, Greenwich.

A. VASSARD.

#### THE FUTURE OF MINING IN CHILE.

SIR,—I have again visited the mining districts of the North of Chile. The riches of this country in silver, copper, silver-lead, and gold mines are a wonderful sight. I had been absent from Chile over gold mines are a wonderful sight. I had been absent from Unite over 20 years, and imagined the country ought to have been pretty well worked out by that time; but I have been astonished to see the amount of newly-discovered mines. However, Chile has lived too fast, overburdened itself with imports, and the result is a complete stagnation in business. Money exceedingly scarce, and not to be procured even at high rates of interest (1 per cent. per month). The result is that mining suffers considerably under such a state of affairs. This is a good opportunity for acquiring mines at reasonable prices. This is a good opportunity for acquiring mines at reasonable prices. This is also the right time for directing English capital to this country. Chile has advantages for safe and sound mining investments which no other South American Republic possesses. No revolutions—a quiet, hard-working, commonsense sort of people; in fact, they are called the English of South America. The financial credit of Chile in London stands high, and her citizens have a great pride (so exceptional with South American Republics) in keeping up their credit at any cost. The navy, as well as every other department, has been considerably cut down. Several Chilian war vessels have been dismantled. The salaries of each employee, from vessels have been dismantled. The salaries of each employee, from the President downwards, have been pruned down 25 per cent.; in fact, a perfect mania for economies, to the extent even of a Deputy to Congress proposing to do away with the chaplaincy of his Excellency the President, saying "his Excellency could go to any church like any other citizen." No considerations should be had for anything or anybody. The credit of the country was first, and above everthing and everybody. There was a grand hurrah! for the Deputy—every precaution taken to meet her obligations.

I have recently received a letter from the Prime Minister, Don Jose Victorino Lastarria, with reference to carrying out all the necessary measures for the complete security of mining titles, and a thorough inducement for inviting English capitalists to invest their

cessary measures for the complete security of mining titles, and a thorough inducement for inviting English capitalists to invest their money in Chile. The letter is as follows:—

Ministry of the Interior, Santiago, Chile, Fib. 12.

Dear Sir,—The contents of your letter, as well as the newspapers which you forwarded me, in which you published several matters of law relating to the perfect security of mining title deeds, in order to attract English capital to this country, are of great interest to me. I have read them with great attention, and you may rest assured that I will co-operate most decidedly with the great object you have in view—for I am convinced of the great results that are to be expected from earrying out these measures.

Jose Victorino Laszarikia.

Mr. Henry Sewell.

from carrying out these measures.

Mr. Henry Sewell.

The latest news from the northern districts is the great bonanza of the silver mines of the Florida, north of Copiapo. The ores assay 1000 marks to the ton, or at the rate of 2000, sterling. These mines

1000 marks to the ton, or at the rate of 20000. Stering. These mines have produced in a short time about \$2,000,000.

The Condes Mines, which were purchased last year on a report of Mr. J. P. Sewell, and 70,000t. paid for them, are turning out beyond all expectation. As he predicted in all his letters, that as they got deeper the ores would increase in silver. The percentage has trebled, from 60 ozs. per ton to 180 ozs., in less than eight months after

As regards Peru. I enclose some printed matter from the South Pacific Times, which please publish with this letter. As I shall be in Lima soon, on my way to London, I shall be able to give you personal details on arriving.

HERRY SEWELL, M.E., F.R.G.S. onal details on arriving.

Valparaiso, Feb. 16.

Valparatso, Feb. 16.

PERIL—Both Government and Congress have been busier during the past forting the time for a long time since the sessions were opened. President Prado has now definitely signed the Cerro de Pasco contract with Mr. Meiggs, and it is believed that within a very short period work will be recommenced on the Oroya Raliroad, which has to be carried to the mines of Cerro de Pasco, where extensive silver-hearing strata are now unworked in consequence of all previous efforts to drain them having proved unsuccessful. The construction of a low level tunnel is one of the conditions of the contract, and those who know the locality state that the cres which will be drained by this work cannot be estimated at less than 500,000,000 ct soles. Great satisfaction is felt at the decission of the Government in this matter, as it is believed the recommencement of the railroads will rapidly restore the country to its former prosperity. The President has also placed his signiture to an amended mining law from which many good results are anticipated. Congress has shown a little more activity, and has definitely passed a law providing for European immigration on a large scale, for which funds are to be provided by the sale of 6 per cent bonds to the value of 2,000,000 soles. Several other measures which are of internal importance have also been sanctioned, and there now only remain two which may be said to effect the whole community, and which require the decision of Congress before its prorogation.—South Pacific Times.

#### RICHMOND CONSOLIDATED MINING COMPANY.

Sin,—The present unsatisfactory position of this company is very remarkable—from one cause or another it is continually in a state of panic; no sooner is one difficulty disposed of than another crops up, as surely as the rising of the sun in the morning. At the last general meeting of the shareholders, in November, we were congratulated and charmed by the exhaustive statement of the Chairman as to the undoubted and increasing prosperity of the mine—so much so, indeed, that the actual quantity of ore in sight would take years to remove it; the payment of dividends had happily been resumed, and would be continued in regular quarterly payments. The shareholders naturally were delighted to learn such cheering accounts. holders naturally were delighted to learn such cheering accounts, and, in fact, were so far carried away with such a hopeful future and enhanced dividends that they determined to treat with scorn and contempt the foul and libellous attacks which had been launched against the company by the liberal circulation of contemptible pam-phlets. Everything apparently went on prosperously for a short time only, when the shareholders were electrified by the informa-

advantageous to the shareholders in both these companies to allow of an "amalgamation." If they are so close to each other as to pre-"amalgamation. vent their operations being carried on quietly and harmoniouly far better that the two companies should amalgamate, and so put a stop to such ruinous litigation, which will entail a heavy expense to both companies, and thus deprive the shareholders of their dividends.

There is an increasing feeling that the present board of directors as now constituted are inadequate to the important duties required of them. A most valuable property is subjected without apparent cause to these repeated and ruinous panics, and the directors seemingly treat them with lightness and indifference, when at the same time the shareholders feel slarmed, and not without reason, when they see the foot of their preparts being decreasited by so trivial as Rain he has succeeded admirably. Having had the conduct for matter as an injuction to the extent of nearly 200,000%. The next half-yearly meeting, in May, will afford the shareholders the right of questioning me on the half-yearly meeting, in May, will afford the shareholders the right of matter. That I may have been a considerable gainer by the change and the opportunity of ventilating these matters, and it will be their

#### CARDIGANSHIRE MINES, A.D. 1877-No. X.

CARDIGANSHIRE MINES, A.D. 1877—No. X.

Str.,—I promised in my last to enter into a few details as to the works that have been carried on in the East Darren and Van Mines. The lodes in both may be estimated at nearly the same size, about 40 feet; at least, this is the case where the best bunches of ore have been found. To account for the immense falling off of produce in the former, in my opinion, we have only to look at the fact that nearly 40 years ago the deepest part of the mine had been worked to a depth of 50 fms. under the adit; it is now 130 fms., or a sinking of 9 ft. on an average per year for the 40 years.

We will now take the Van, where ample machinery was provided for sinking the mine 15 fms. yearly, or ten times the quantity of ground sunk through than was done at East Darren, and the lode proved to have maintained its size and productiveness, which has already given 300,000/. in profits, whilst the ore laid open in reserve is capable, according to the estimates of the manager, of giving 300,000/. more. The Van is the only mine in this district that has been sunk with such rapidity, and that followed the Cornish plan of opening out their works quickly. As the mines are in the same bearing strata, I would ask your readers to form their own conclusion as to what might have been achieved if the East Darren Mine had been pressed forward and carried on as the Van Mine has been done. Before entering on the merits of any other mine, which I hope to be able to do in my next, I wish to state that I think all parties engaged and connected with the working of mines in this vast district may take heart by the fact herein mentioned, which is that the one, and the only one, mine in this and the adjoining county has proved in a few words—all that can or could be desired.

trict may take heart by the fact herein mentioned, which is that the one, and the only one, mine in this and the adjoining county has proved in a few words—all that can or could be desired.

Where people have such lodes as are found at E-gair-Hir to the north, and Frongoet to the south in this county, each being of greater width than either of the two of which comparison is made, I think I may with a great deal of propriety ask what there is to be feared for the future of mining in this extensive district if properly and energetically worked.

ABSALOM FRANCIS.

Goginan, Aberystwith, April 4.

#### PARYS MOUNTAIN MINES.

SIR,-Having at various times made visits to these remarkable SIR.—Having at various times made visits to these remarkable mines I may be able partially to reply to the enquiries of your correspondent in last week's Journal. The sulphate of lead he alludes to is probably the sulphide of lead which was found in some quantity and of good quality in one of the lodes of the Morfadu portion of the property. I cannot tell without reference to my notes why the working of this lode was discontinued, but I remember that it was at no great distance from the surface. The extract from the cyclopedia given by your correspondent can scarcely represent the facts as they existed—that "the sulphate contained 50 to 60 ounces of silver per ton; which, however, it was found impossible profitably to smelt, owing to difficulties in separation of the various ounces of silver per ton; which, however, it was found impossible profitably to smelt, owing to difficulties in separation of the various minerals." Had the ore been anywhere near as rich as mentioned means would have been found for its extraction. Difficult as it is to obtain without loss the whole of many metals contained in mixed ores, still it has for a long period been known how to eliminate one metal at the sacrifice of others. Instead of 50 or 60 ounces probably 5 or 6 is nearer the truth. When the working of the Morfadu division of the Parys Mountain Mines was temporarily abandoned not very long since there were two lodes that had been driven in the direction of the Great White Rock, from one of which good stones of sulphuret of copper were being taken of almost sufficient value to pay cost in times when a good price for copper should be value to pay cost in times when a good price for copper should be ruling. These two lotes are nearly at right angles with the vein of "bluestone." When lust in the underground workings! I chipped off a piece of this singular combination of metals, and as attention seems again to be awaking to the subject it may be interesting to some of your readers to see an exact analysis of the said "bluestone," and which I will endeavour to send in time for your next issue. CALAMINE.

#### PARYS MOUNTAIN MINES.

PARYS MOUNTAIN MINES.

Str.,—I have read with pleasure the letter of "A Large Shareholder" on this property, and think his scheme for further developing the Morfadu part of it deserving of consideration. It would appear from this letter and your remarks on the mine that we are in the happy position of having a really good chance of meeting with so mething good in the Morfadu estate. As we are now getting well into the spring I think no time should be lost in opening out the mine. A special meeting of the shareholders should immediately be called to discuss the ways and means. With respect to the other branch of our property I must confess myself disappointed at the tedious delay in reaching the goal. Three months ago we were told it would be only a few weeks or even days. So far as I see from the reports we are not yet likely to reach the ore. We are in a very long lane indeed, and it is high time we had a turning. To suggest that we are following a "Will-o'-the-wisp" would be, I conclude, high treason. I trust the management will soon be able to give us conclusive proof that it is not so. give us conclusive proof that it is not so.

April 4. ANOTHER SHAREHOLDER.

#### CAPT. TREGAY, AND PEDN-AN-DREA MINES.

CAPT. TREGAY, AND PEDN-AN-DREA MINES.

Sir,—Your extraordinary correspondent "W. X." seems scarcely able to find a sufficient number of epithets to express his ideas in this case. He objects to almost everything. Objects to tell us who he is, and objects to being referred to as an anonymous writer; objects to having his questions unanswered, and objects to the answers given. Perhaps I ought to beg his pardon for having referred to him as an anonymous writer, for he has set his music too close to the minor key to allow any mistake being made as to the identification of the composer. Having put himself in a false position by his arrogance, he must be content with what replies I chose to give him. I may also tell him that it does not affect me much what he either believes or disbelieves, so that he can enjoy full scope for his assumed scepticism. I will say, however, that I did not give the answer to Question No. 3 which has been attributed to me, rather having to thank the Editor or compositor for having printed anything so conciliatory as that I would write "W.X." which I certainly did not say. It has, however, gained me the credit of having devised a cunning reply, and I sup-ose that we must be thankful for small favours. "W. X." thinks himself very clever at figures, no doubt, having given us extracts from the balance-sheet issued June, 1875, and from that issued March, 1876. But where is the sheet which gives the seconds heterore. because a spontaneous companion. The boservations I made in your valuable paper, and which can the boservations I made in your valuable paper, and which can the boservations I made in your valuable paper, and which can the boservations I made in your valuable paper, and which can be sheeped to the Royal Commission on spontaneous combustion is deeply interesting to the shipping and mercantile amountly—to shipowners and coalowners in particular. It is different ways. The action of the Government, as one of the relative to the same and the same and coalowners in particular. It is different ways. The action of the Government, as one of the relative to the same and money. "W.X." presumes to give mea lesson on wisdom and discretion. I suppose he thinks it would be quite discreet on my part to answer every question which every Tom Nobody who is ashamed of his own name may think proper to get inserted in a public paper, not-withstanding its being accompanied with dark insinuations, cautions as to telling the truth, and as many other insults as he can get

as to tening the truth, and as many other insults as he can get printed under an assumed signature.

As regards Pedn-an-drea Mines, I worked them with and for the late company's interest so long as they stuck to them, and have been able to work them without their help since. I did not advise them to sell, but quite the contrary, consequently have nothing to answer for to the late company, as has been already amply proved. It is, therefore, nothing less than sheer impudence on the part of "W.X."

Shareholder" in the above mine speaks in the highest terms of it, Shareholder" in the above mine speaks in the highest terms of it, and anticipates that it will at least be one of the best in the county. It must be gratifying to the shareholders who, like myself, have held on to it through "good and bad report" to find that at length it is likely to turn out so well. Even at the present price of tin a good dividend is anticipated at the next meeting.

Belfast, April 3.

#### WEST TANKERVILLE.

-Owing to the failure of the Burry Port Company, I am afraid that a further call of preference capital will have to be made. to the detriment of ordinary shareholders, thus delaying the time which we had hoped was not far off of receiving dividends. The thought occurs to me that under such an exceptional and unlooked for occasion a special effort should be made to meet the case, and for occasion a special effort should be made to meet the case, and would suggest that a subscription of 1s. 6d. per share be made on both classes of shares, thus raising 1125d., repayable out of any dividend the Burry Port Company in liquidation may declare making out with the first profits of the mine. By this failure shares have declined 10s. each, by my suggestion being carried out (considering that the mine is now more than paying its way, and that in the course of another six weeks time a deeper level will be opened out, thereby increasing the returns of each. It think shares would again thereby increasing the returns of ore), I think shares would again command their former price. I cou'd enlarge upon the benefits to both classes of shareholders by such a course of action, but no doubt it will be obvious to all. I hope to see the matter taken up, and am ready any time with my proportion.

FROM A COUNTRY SHAREHOLDER.

#### DR. EMMENS'S MINES.

Sin,—I am a creditor of the learned Doctor, who set to work the mines which went under his name, but which have had several aliases, and the affairs of which I believe was to be wound up, and the creditors to be paid. A good while has passed away, and I have not heard that anyone has been paid. I have not received a penny, nor have I any knowledge of the present posture of affairs. Perhaps one of your readers can inform me as to the prospects of a dividend on, or settlement of, claims.—Calstock, April 4. A CREDITOR. on, or settlement of, claims .- Calstock, April 4.

#### TRIAL BY JURY.

Sir.—One of the absurdities of long existence is the trial by jury—I mean the requirement of unanimity of judgment in the 12 men who compose it. Unanimity is not required or expected in any other deliberative assembly in the world. In all Parliaments measures are carried by majorities; in all meetings of companies and committees the decision is by the majority, to which the minority must bow. Why a jury should be an execution from the general rule I am at a Why a jury should be an exception from the general rate I am at a loss to conceive, unless it goes upon the supposition that the evidence on the trial is so complete that all must be convinced alike, and, therefore, concur in opinion, and give a joint verdict. But we all therefore, concur in opinion, and give a joint verdict. But we all know that there are few subjects on which any 12 men think alike, and it is a very rare circumstance to find a unanimous voice in any assembly. A motion may be said to be unanimous when it is unopposed by the non-voting portion of an assembly; but if all were to vote such a declaration could not be given, except in very few cases. Now, in a jury all must vote, and all vote one way. If otherwise there is a "locking-up" (sometimes for a night) to make men think alike, but men's minds are free, and although to get liberty an obcting juror may give up his judgment to the 11, there is no change in his opinion :-

in his opinion:—

"Convince a man against his will,
He is of the same opinion still."

If the locking-up does not coerce the objector, the case is dismissed,
and all costs of proceedings wasted. There was a case in point at
the last sitting of the Vice-Warden, at Truro, in which Capt. R.
Pryor was the plaintiff. The jury could not agree, and the case was
therefore dismissed, to be tried, perhaps, de novo. Trial by jury is
a fair mode of deciding a case, but the decision of the majority should
be taken. If the jury is genging this light the judge should give the be taken. If the jury is equally divided, the judge should give the casting vote. Such is my view.—April 4.

#### BEDFORD UNITED MINES.

Sir,—The reply of Mr. Laws, in last week's Journal, to my letter in the Journal of March 24 is, under the circumstances, fully as well as might be expected. I very much regret, however, to learn that I am in any way associated with a company some of the sharethat I am in any way associated with a company some of the snarsholders of which—and it may be those who pretend to be his best friends—should be so mean spirited as to have no more regard for the feelings of their Secretary than to impose upon him the arduous task of replying to a letter against his wish, for everyone knows if a person has not reason and sound argument on his side all he says only tends to make a bad case worse. I can assure Mr. Laws that the only object of my last letter was, as this is, for the benefit of my cardiate there are no neighbourhood if they would only take note. my co-adventurers and neighbourhood, if they would only take note of it, and I had not the least idea of abusing him or the committee.

Mr. Laws says such letters will do no good; but will you allow me to say that the waste heaps and partially demolished account-houses, engine-houses, and stacks with which Devon and Cornwall are so plentifully supplied as to meet one's gaze whichever way he turns, are not crumbling monuments of rich mines in days gone by, of the local winders at him tare avisting and almost living and support living and su poverty of the lodes underneath, but are existing and almost living evidences of injudicious, inconsistent, and extravagant management, and witnesses of the fact that the meetings were held in London or somewhere at a distance from the neighbourhood of the mines, all of which some philanthropist ought always to expose or bring before the minds of speculators. It meetings were held on the mines shareholders in the neighbourhood who are mostly acquainted with shareholders in the neighbourhood who are mostly acquainted with mining, and many thorough practical miners who have paid particular attention to the working of mines in which they are shareholders, would attend when they could, and would speak of any change which from their practical knowledge they might think an improvement, and of the results of their watchfulness as to whether anything had been carried on wrong or not; then if this were reported, as it should be distant shareholders would have the chance of reading it in public print, and of judging for themselves the right side from the wrong. Mr. Laws will please make a note of this. I shall say no more about the local purser and resident agent, for although their cap of joy must overflow at the idea of the chance of getting a certificate from someone unknown, to carry them no one knows where, and that their long services may not be entirely ignored, yet underneath there is the bitter taste of gall. The rule of the bitter taste of gall. The ru the future cost-sheets to hear the signature of the manager must have been spoken into existence from naught—a new creation commenced. I have no hand in the speculation of buying in South Ward engine, therefore shall have no hand in making a place for it Ward engine, therefore shall have no hand in making a place for it at these or any other mines, consequently you will not require to hear anything more about it at present. For the satisfaction of myself, and shareholders generally, will Mr. Laws kindly reply shortly but pointedly to the following questions:—I. Who are the practical authorities that have expressed opinions on the Bridge and south lodes, and their further vigorous development?—2. Are they shareholders, and get to rear calls to gave it out on the state of and south lodge, and their further vigorous development:—2. Are they shareholders, and got to pay calls to carry it out, or do they receive a salary from the company?—3. As Mr. Laws has the reports since 1846 for 31 years, will be kindly state the size, composition, and underlie of the Bridge lodg, where and when seen, and at what depth from surface?—4. Give same idea of the amount and value of depth from surface?—4. Give same idea of the amount and value of the ore taken from the south lode?—5. Is it practical, judicious Is it practical, judicious, and economical management to sink a level in an abundance of water, and then let it stand until the level below comes forth to drain it (this must be the case, for I see no report of it now), and to allow

be sunk dry and would have the double advantage of ventilating the ends and cutting out ore ground which could be taken away to an advantage, to pay the cost for which the shareholders have confidence in the directors, in the analysis of people who will not and cannot see beyond to the same.

W. TREGAY.

SOUTH CONDURROW MINING COMPANY.

SIR,—I find upon looking over last week's Journal that an "Old Shareholder" in the above mine speaks in the highest terms of it.

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Size,—I find upon looking over last week's Journal that an "Old sand cutting out ore ground which the shareholders have now to promise of people who will not an advantage of ventilating the ends and cutting out ore ground which have now the sand cutting out or ground which the sharehold mines to place them in a paying state

A VIGILANT SHAREHOLDER,

#### PLYNLIMMON LEAD MINING COMPANY.

SIR,-I wish to direct the attention of your readers to this mine as being one of the best I believe for investment. The mine is a shallow one, from which lead ores have been sold amounting to about 35,000%. The shaft is now down 11½ fathoms towards another or 36 fm. level, which it is expected will prove very rich. Intending purchasers should not fail to have it inspected by some inde-pendent agent for their guidance. Should the lode be cut rich (and judging from the sinking of Herbert's winze, which is only down 2 fms. 5 ft., and is worth full \(\frac{1}{2}\) ton per fathom) its value would be greatly enhanced. The company has about 3000/ in hand to prove the mine, and it is hoped bring it into the Dividend List. They have just sold 20 tons of lead ore for 270/, which I understand greatly enhanced. nearly pays costs.

#### NEW CONSOLS MINES.

SIR.—Permit me to suggest a mode by the adoption of which the works may be carried on, and all the creditors paid:—
1.—The shareholders who advanced money to meet the cost up to

this day should receive no interest on those portions of the advances which were made to cover the calls on their own shares; and on the other portions no more than 4 per cent. per annum should be charged. The charge of 3:00, per month is intolerable.

2.—The directors should have no salary, nor be allowed any travelling expenses, because they are altogether a useless body of men.
3.—The London office should be aboli-hed, and the accounts kept exclusively on the mine under the supervision of the local committee.

4.—The engineer so called, should be dismissed, which would effect a saving of about 250L per annum, which is now not required.

a saying of about 2006, per annum, which is now not required.

5.—The local committee being men of business should be held responsible, jointly with Messrs. R. Pryor and Son, for the good management of the mine; and I will undertake to say that if Capt.

Pryor's advice prevails with that committee, prosperity will yet result.

The registers conduct of the Leader discovering the content of the leader discovering the leader discov The reckless conduct of the London directors deserves the result. The reckiess connect of the London directors deserves the severest reprehension from the body of shareholders, from every creditor of the company, and from every labourer on the mine.

I have been told that refined arsenic was sold by the temporary resident director at 6t, per ton. I am of opinion that a mass of ini-

quity will be brought to light by-and-bye by-Phymouth, April 3.

#### NEW CONSOLS MINES.

Sir.—There are two letters in last week's Journal respecting this property which deserve to be read. The one is an attempt to bolster up the late manager, Capt. Pryor, at the expense of the directors, who have so long trusted in him and his judgment, and the other is a quiet and suggestive letter which seeks to impress on the new committee the responsibilities of their position, and the necessity for exercising an independent authority in reference to the new management of this admittedly valuable but hitherto badly managed management of this admittedity valuable but attactor badly managed property. Possibly the directors, or some of them, may reply to the letter written by Capt. Pryor's champion, or more probably they may not do so. But if Capt. Pryor is to "manage the mine in his own way" I for one (and I speak as a long-suffering shareholder) will make a present of my share certificates in the company to the nearest trunk maker. But these repeated efforts of Capt. Pryor to bolster up his tottering position will recoil on himself. I have been facoured by a mine horder with a list of the mines entirely managed. favoured by a mine broker with a list of the mines entirely managed by Capt. Pryor during the last 15 years or so, and I find that he has been the sole local manager, the sole local executive, the sole local everything in fact, of a dozen mines, nearly all of which has stopped working, and which have taken somewhere about 300,000% out of the pockets of the shareholders from first to last. Comment is needless; but this I will say, that if Capt. Pryor is still to be the manager, to do as he likes with New Consols, I shall hold the directions. tors and also the local committee responsible for their management. I do not find that in Cornwall Capt. Pryor is looked up to as a shining light, and I do find that in London he is regarded as as a siming light, and I do find that in London he is regarded as almost the other thing. If others want to know about Capt. Pryor let them enquire as I have done, and I think they will feel somewhat astonished; but if the directors suffer the things to be continued that have been perpetrated for some time past they will deserve little sympathy from their co-shareholders. Mr. Pryor has boasted over and over again of making 1000% a month profit, he has written reports that have proved valueless, and made speeches at meetings that have proved delusive, and should not be received. has written reports that have proved valueless, and made speeches at meetings that have proved delusive, and should not have emanated from a practical miner. He may be honest, but I submit that under the circumstances his retirement is anecessity. When attacks are made upon gentlemen who have actually provided coin to the extent of some 50,000% in a couple of years, by a servant who has always had his own way, and who has often signally failed, it is time that they should assert their true position. The success of New Consols is a matter that concerns the country of Cornwall, and I am glad to see that the local committee will take charge of it, and upon them will now rest all the appointments of managers and men, as well as the credit of success, or the odium of failure. I trust that the committee will be strong enough to carry out their own views. the committee will be strong enough to carry out their own views, and that they will not be prejudice in favour of either one mode of treatment of the stuff or of another. The question of concentration is the turning point of the whole concern. It is said the idea of stamping the stuff is bad, because crushing is cheaper and will make less slimes. I firmly believe the jizgers will take properly crushed ore, and reject 60 to 70 per cent. Messrs, Burnett, Green, and others say so, and it is done elsewhere. The stamps merely prove the value of concentration, but they will not prove which is the best method. Let 500 tons be put through the stamps and strips, and an equal quantity through the crusher and interest. and an equal quantity through the crusher and jiggers. Let quantities and results be carefully noted, and then something will be decided upon. The mine has machinery for treating 100 tons per decided upon. The mine has machinery for treating 100 tons per day if the waste be rejected, and this means over 5000/. monthly. which should leave 2000. profit. If this is accomplished the quantity can be gradually increased, and New Consols become the source of great profit to creditors and shareholders, and a credit to the punty, but if only 20 tons a day are to be treated, and put into the treated, and put into the treated in the shape of mud, then further loss is inevitable. It is pity Mr. Pryor's backer does not understand figures, but he may arraces in the snape of man, then further loss is inevitable. It pity Mr. Pryor's backer does not understand figures, but he may have a malevolent desire to distort the facts. It is not necessary to pay off the 40,000% of debentures, and the products on the mine are amply to pay the wages. Many of us are wealthy men, and are ready to put more money into the concern, but it must first be made to show honest profits, as we are heartily sick of Mr. Pryor's progations and his delusive promises.

Warington Smyth, I observe, attended the New Consols meet-

ing, and spoke earnestly with regard to the mines, and those know this gentleman will attach a far greater significance to his words than to the reports of the different people who have inspected the property from time to time. No question arises as to the mine themselves; the sole point is in regard to the treatment of the stuff. Mr. Smyth says selection is everything, and instances the St. John del Rey Mines as evidence of the value of selection, and he further states he has repeatedly urged it on Mr. Pryor, and therefore I ask—Why has not Mr. Pryor carried this into effect? Why, in fact, is selection studiously avoided, and stuff only fit for "mending roads" put through a process that coats 25s. per ton? And yet this is the manager who it is impudently suggested "should have his way." People may think as they like, and the committee may be deluded arough to follow the suggestion but they will get no more more. enough to follow the suggestion, but they will get no more money out of me and others if they do. On the other hand, if the concern is made to pay and money is wanted to put up jiggers there will be ends a level or two above to be driven in foul air when winzes could plenty of money forthcoming for that or any other useful purpose. other points in connection with this subject which I should be a level or two above to be driven in foul air when winzes could plenty of money forthcoming for that or any other useful purpose.

NEW CONSOLS MINES.

Sir,—I question whether it ever happened that a mine fall worse hands than those into which New Consols has, using fallen. Few mines have prospered under the control of great deal of time on the mine, and has increased the ost 1000l. to nearly 2000l. per month for labour only, and has contact no more, main total of liabilities 61,000l. I have been told that they excel amount. The directors also sent down a Mr. Burnett said to company's engineer, but from all that I can learn his engine has been mil, but he has a salary of about 250l. per anum, selections and expense paid. A sad instance of extravagance. It has been paid. has been nil, but he has a salary of about 250l, per annum, expense paid. A sad instance of extravagance. It has been to me that for the advances made by what are called delaholders (really the directors, who are also shareholders) as made of 300l, per month for interest—nearly 10 per centered and the control of the directors and the leastablishment are about 150l, per month more. It can be establishment are about 150l, per month more in the establishment are about 150l, per month more in the same that it was the intention of those gentlement of mine into liquidation that they might obtain it for other, a limited liability company, and all the capital (as it is up, the creditors would have little or nothing towards their I regret that a promising—a good—property should have infairly dealt with. No mine, or very few, could stand a travagance as has been carried on here. Whether the loss mittee will be able to recover from the evils entailed on the remains to be proved. I question the legality of the charg for interest, because those who advanced the money are share for the charge for interest, because those who advanced the money are shared. remains to be proved. I question the legality of the charge for interest, because those who advanced the money are shard whose duty it was to supply funds to the extent of their skilled carrying on the works. I do not think the Registar of the Warden's Court would allow such a charge as nearly 10 per such advances. If the management of the works is left to committee Capt. Pryor's honesty will be shown in all respectives. profits certainly given.

"A Callingtonian," in last week's Journal, says it is not no

a mine manager to be a purser, intimating that Capt. R. Prysm both. Captain Pryor never was a purser in any mine; be as handed to the labourers the cash sent down from the Londonski handed to the labourers the cash sent down from the London at As to a manager being resident, Captain Pryor's son, who is in manager, lives on the mine, and is a very intelligent, steady and rarely goes off the mine except on the company's affining Capt. R. Pryor has spent most of his time there for many man Mr. Burn-tt is an unnecessary appendage, and should have notice quit, and the directors should neither have salary nor tracking penses, because they are worse than useless. AN OBSERVANT MINER Calstock, April 2.

#### NEW CONSOLS MINES.

Sin, -Your "Callington" correspondent evidently wis to ome knowledge of affairs. It is no secret here that and edded a necessary if New Consols is to be a success, and as land ontributes two members of the committee who will take such contributes two members of the committee who will take any part in the work of superintendence I hope they will red; correspondent's letter and act upon it. Tavistock, Caling Luckett, and Calstock have been greatly benefited by the per month spent in connection with New Consols, and there a deep debt of gratitude, for although the members of the mittee are large creditors, yet they have only to werk lost and intelligently to make New Consols a success and get money. I am glad to hear from a member of the committee the appointment of agents will rest with them, and not the directors. There are three times as many agents as bught to be, and about twice as many men, and the r frightful expenditure. The manager must live on the must stick to it alone, and then if each member of the in turns will make a point of attending daily on the min good will result. If New Consols is made a success the holders will no doubt soon raise the money to pay off the ness. The time of year is in favour of the property, as co-operation will soon put matters right. The mistate appears to have been in treating rubbish, and if the staff heen selected then I consider the manager very greatly We look up in Devon Consols, of course, as our best try as the managers are men of very great experience, and jog-trot ideas of "bal" captains. I recommend the Ne agents to have a look at the new jiggers at work there, Cornishmen are too obstinate to step across the Tamart machines, however good they (the machines) may be heard it said by many that New Consols can be made to the contract of the con heard it said by many that New Consols can be made to 2000 L. a month profit, and I do not doubt it, but to do stuff must have the poor taken out of it. There is not about it, but if managers do not understand their work, not be taught, what is to be done? Look at what the Germany. Why do we not import German managers mines? I believe that Cornish miners and German managers produce a good result and I make the succession "grate". produce a good result, and I make the suggestion Capt. Pryor's champion facetiously observed last ay has gone by for hoping to improve the "breed" of y has gone by for hoping to improve the "breed long as they had rich mines they did well enough t has become necessary to cut and contrive they are not end it, and as very few mines can be called rich with the existing of f metals we must look out for a new race of managers. Tavistock, April 4.

#### NEW CONSOLS MINING COMPANY

Six.—Seeing two letters in last week's Journal on the aborest ject I have been induced to send you a few of my views control the same. "An Observant Miner" is certainly very hard at London directors, as he would have it appear the present unball state of figure is the state of figure in the state of figure is the state London directors, as newonic have it appear are presented in state of affairs is due to their exertions alone. I do not the Capt. Pryor would for a moment agree with this, for Ib has received the greatest assistance from the directors, as pent a considerable amount of their time on the mine wand they have also obtained the services of an engineer many, and he has also been all his time on the mine. On the considerable amounts have been also been all his time on the mine. naturally say after this that what has been done was with the promote the welfare of the concern. One of the directorsterthwaite—has sacrificed a great deal of his time to that me the sacrificed a great deal of his time to that me the sacrificed a great deal of his time to that me the sacrificed a great deal of his time to that me the sacrificed a great deal of his time to that me the sacrificed a great deal of his time to that me the sacrificed a great deal of his time to that me the sacrification of the sa tells us in his report, and we also learn from th tells us in his report, and we also learn from the same; he has mastered every difficulty in connection with the mother letter, signed "A Callingtonian," reads to me more nating from a Londonian. He simply gives a little cheap the committee, by telling them what he himself wishes to I have a decided objection to anonymous correspondent sonal character, but I sincerely hope that the real cause fortunate collapse of this concern will be brought to light

subject thoroughly ventilated through the medium of your careful the works is aware that mense amount of new work and extensions have been lately and the works in the works in the work and extensions have been lately according to the work and extensions have been lately according to the work and extensions have been lately according to the work and extensions have been lately according to the work and extensions have been lately according to the work and extensions have been lately according to the work and the work and the work and the work are the work as a subject the work and the work are the work and the work are the work and the work are the work as a subject through the medium of your careful work and the work are the work are the work and the work are th on, and those who have lately inspected the mine still regreat deal more being done, but, I would ask, was it they are certainly responsible, to have all this done at all the company must really have been in an insolvent company must really have been in an insolvent company must really have been in an insolvent company must have done the circum of the company have not be supported by the company to be supported by th of the company, have rather compelled every economy to be instead of authorising extensions which must have incurred a amount of expenditure? I cannot but conclude that the final condition of this condition of the condition of amount of expenditure? I cannot but conclude that the accordition of this company was never what it has been represent on the contrary. I have little doubt that when the details of it affair are unfolded it will be discovered that they have been at affair are the for a long time past, although cleverly considerable the only way I can account for the collapse at a time with there is such a quantity of valuable products on the mine, and all there is such a quantity of valuable products on the mine, and all the products of PRIL to, but

e what are mai James A. Wha have g id are

to, but will not for the present trespass further on your valu-

#### NEW CONSOLS MINES.

NEW CONSOLS MINES.

NEW CONSOLS MINES.

NEW CONSOLS MINES.

In must confess I do not understand the position of this many, and I think enquiries should be made into certain matpany, and I think enquiries should be made into certain matpany, and I think enquiries should be made into certain matpany, and I think enquiries should be made into certain matpany, and I think enquiries should be made into certain further saterthwaite, a well-known Stock Exchange broker, are the Saterthwaite, as well-known Stock Exchange broker, are the saternaments of the New Consols Mines, he has written sheets repeatedly to the New Consols Mines, he has written sheets repeatedly to the New Consols Mines, he has written sheets repeatedly to the New Consols Mines, he has stated over and sheets of reports, and in those reports he has stated over and sheets of reports, and in those reports he has stated over and sheets of reports and that certain further sagnin that profites were subscribed money, and I betties statements I and others have been got by the directors from something like 20,000. have been got by the directors from something like 20,000. have been got by the directors from something like 20,000. have been got by the directors from same harbolders, and I think a public meeting should be held the shareholders, and I think a public meeting should be held the shareholders and the same states are surplus of many thousands, and row we hear told there was a surplus of many thousands, and row we hear told there was a surplus of many thousands, and row we hear told there was a surplus of many thousands, and row we hear told there was a surplus of many thousands, and row we hear told there was a surplus of many thousands, and row we hear told there was a surplus of many thousands, and row we hear told there was a surplus of many thousands, and row we hear told there was a surplus of many thousands, and row hear to the since of the shareholders, for the miners it have got thousands out of the shareholders, for the miners it have got th don, April 5.

#### VIRTUOUS LADY MINE.

VIRTUOUS LADY MINE.

I know well where "Buckland Monachorum" is situated, ald that I could, with a similar simple geographical know-liseover the whereabouts and real cognomen of your last correspondent who uses it as his nom de plume, but perhaps not consider it the quintessence of cowardice to hurl poisoned from a hidden retreat. As for "never having seen a course "mining generally has of late years, by mineral facts and is, receded to such a low ebb that this galaxy of luxury is within the reach of the favoured few, your correspondent cland Monochorum" inclusive, to wit. I have certainly in my is the same ordinary manner that each and everyone of us d Monochorum Inclusive, to wit. I have certainly in my be same ordinary manner that each and everyone of us find ourselves possessed of more shillings than sovereigns, with interest the cutting of a lode, the budding and burst-of a rich course of ore, to find about 6 in. saleable mateforth of a rich course of ore, to find about 6 in. saleable matefigerent copper ore, to as many feet of the "keenly" article,
mosey value whatever; and mayhap if the whole of the rematires of the mining interest told their tale in a similar unshelstyle a tolerably correct estimate could be formed of "a
eofore." "Out of evil sometimes cometh good;" it had quite
d my notice, but I have without delay, at the request of
kland Monachorum," made solicitations in the proper quarter
slord's agent of the Virtuous Lady Mine to take not less than
yhes from different parts of the lodes, and send a fair average
srs. Johnson and Matthey and Dr. Phipson, for silver assay
alysis.—Bishopsgate, London.

THOS. J. BARNARD.

#### VIRTUOUS LADY MINE.

m.—As one of the old shareholders, and noticing your corre-oden of last week. "Buckland Monachorum," I should further to have substantial proof that this peculiar mine with its un-ally large lodes will average for their whole width 5 to 7 ozs. regulates will average for their whole width 5 to 7 ozs. ton. That the lodes are in places over 100 ft, wide there dispute, and even in the last working returns of rich ore inly made, for I purchased shares upon the strenth of a risit to the mine, after they had actually sold 100 tons at the tisk-tings, which realised over 750 l. For my own I had several assays for silver made of rich copper stones, being 10 to 16 ozs. silver per ton. I also broke several nuger recks just inside the large cavern hanging oversemust be tons in weight, and split up as they were had appearance, and seemed to be falling to the ground; the traces of copper, but the silver assay gave 7 ozs. per thank Mr. Barnard for the loss of several hundred leve him to be honest and zealous in the cause he is out believe him to be honest and zealous in the cause he is a sub-like to see every man have fair play. For my part toubt that large quantities of lodey matter—say, by the ion of fair capital, 100 tons per day—can be easily broken, 5 ozs. silver per ton, but I am sceptical as to whether it tracted to profit. I have no desire to throw cold water undertaking, and may perhaps again become a share-th must be convinced beyond the shadow of a doubt that can be secured to good profit before doing so. ONE OF THE OLD SHAREHOLDERS.

#### VIRTUOUS LADY MINE.

-The letter of "Buckland Monachorum" last week is to the Let Mr. Barnard prove as suggested, by further and the best nt. Let Mr. Barnard prove as suggested, by further and the best hority, that even 5 ozs. silver to the ton exist throughout the ole of the large lodes of this mine, and it may yet become a te. As for extracting 5 ozs of silver from each ton of stuff, with plur, copper, &c., to help pay costs, I have seen quite enough to certain it can be done, but the question to me is to have it in one to extract, and I can hardly believe it exists; perhaps I ton youtain 7 ozs., and 100 tons only 1 oz., or nothing at all, othere if the whole really gives 5 or 6 ozs. there is nothing "rhapsol" in Mr. Barnard's apparently strong statements that millions bunces of silver exist in the mine. Let the lord's agent take fair hand Journal. This is but fair to the public, and if Mr. Barnard amest and honest, as he represents, it can only tend to his good, will materially assist him.

LOOKER-ON. will materially assist him. LOOKER-ON.

#### THE TREATMENT OF POOR ORES.

m.—Agreeably with my promise I essay to clearly prove to readers the cause of a qualified result only having hitherto at-led the treatment of poor ores in the neighbourhood of Calling-It is parfectly true that the New Consols proprietors have not isred a commercial success with my Nascent Copper Process; etheless, they have sold thousands of pounds worth of silver ses, they have sold thousands of pounds worth of silver from low-class copper ores giving only 3 ozs. silver to the ed fact which some few years since was pronounced at any cost to be impossibile. I still maintain, as of yors, that honesty of purpose is eye, and had the representatives requested me to superintend the treations and the representatives requested me to superintend the treations and the proper silver of the proper silver of my patents, the now far from its present state, by paying handsome dividends to dee. A few words will suffice to show the paramount cause of the faint in the aggregate only 20s. worth of metal, and it costs over that ones, the obvious impossibility at once arises that no real success can ele, although science may actually secure the silver. I say that thousends of younds have been literally wasted at New Consols, the of the amount under proper management would have made the mine fact and profitable. The simple yet great secret of success is in the effectual treatment of the ores during the stage of conversion from insolubles and Ledim, after years of toil, to have discovered, perfected, at plan by which 100 tons per day can be operated upon cheaper as and attom than it has cost the New Consols Company to treat 30 tons. and attom than it has cost the New Consols Company to treat 30 tons. and attom than it has cost the New Consols Company to treat 30 tons. and attom than it has cost the New Consols Company to treat 30 tons. and attom than it has cost the New Consols Company to treat 30 tons. and attom than it has cost the New Consols. thousands of pounds worth of

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me much harm by abusing its use. I cannot help their ores being so remarkably and wretchedly poor as to contain only 3 ozs of silver to the ton, and they dare not blame me for their failure, neither can they frame any exones or pallate their own conduct in spending thousands of the shareholders' money upon a process of which they knew absolutely nothing, and no legal title to appropriate. It would require more than a three volume novel were I to go into full particulars, therefore I will merely refer to my first interview with Messrs. Pryor and Phillips, the pioneers of the New Consols, which took place some three years since, and well do I recollect their innocent infantile shouts of glee when first witnessing some of my experiments upon rich ores, and the precipitation of chloride of silver and copper by the aid of steam and iron to them, the now learned swants, but with their then blissful minds, the very acme of a marvellous phenomenou, still it is useless to dwell further upon the subject, and it need only be added that they were duly informed of the incapabilities of their revolving furances to operate upon any stuff, more especially the very lowest of low-class ores, when a fully frank, if not exactly humble, admission was returned that they knew more of the process than the inventor, refusing to pay even his out-of-pocket expenses for travelling, assay fees, &c.; therefore, the present faiture can only be traced, to use mild terms, to dogged obstinacy and ignorant concoit. There is now one and only one remedy, and that is too write off 20,000, wasted in furances, &c., to "Ignorance Account," spend 1000. in plant that will really chloridise cheaply and well, and obtain the services of someone who understands the business, and has the legitimate success of the process at heart, otherwise any additional capital expended under the present regime will be but the further wasting of mosey.

The future will solve this secret, and prove me to be either right er wrong, for I shall soon have the opportunity at the ne much harm by abusing its use. I cannot help their ores being so remarkably und wretchedly poor as to contain only 3 ozs of silver to the ton, and they dan oto blame me for their failure; neither can they frameany exouse or pallate their

#### BORING MACHINES FOR MINING.

Sir,—If the belief in the practicability of effecting a considerably greater progress at less cost driving levels and sinking shafts has not already taken possession of men's minds in Cornwall, that ably greater progress at less cost driving levels and sinking shafts has not already taken possession of men's minds in Conwall, that great barrier to progress, prejudice, is trembling. Other efforts are about being added to what have been made. Beaumont's percussive drill will have an effectual trial at Carn Brea. The question is not, or ever has been, in my mind, the practicability of boring holes, and that in any direction, with the aid of a strong explosive to breakl the ground sufficiently to answer one's purpose. That Beaumont's machine will succeed I take for granted. I would say the same of McKean's, the Kainotomon (the father of the Barrow, and which can be had at 30l. to 35l. each), the Burleigh, the Darlington, which in all cases, wherever tried, is not excelled for effect and economy of cost, time, and air. Beaumont's drill is both more powerful and larger than any drill hitherto tried in Cornwall. How far this is necessary in the days of strong explosives may be doubtful. If the diameter of the piston holding the borer be 5 in., as against the diameter of 3½ in. of other machines, the one of 5 in., working at an air pressure of 45 lbs. per inch, represents a blow of 1100 lbs. or 1200 lbs., as against 3½ in. at a pressure of 60 lbs., of 660 lbs., or nearly double the force and double the consumption of air, the length of stroke being the same. The question occurs—What size are your borers? Do you purpose boring holes of 2 in., 1½ in., 1 in., or 13-16ths, the last enabling you to drop down the cartridge and press it close to the sides of the holes? The disadvantage or advantage of boring big holes or small ones depends on their number and the strength of the explosive. advantage or advantage of boring big holes or small ones depends on their number and the strength of the explosive. Of the boring machines patented the writer has seen nearly all,

and has no hesitation in saying they will all bore or beat out holes. It is a question of first cost, cost of wear and tear, and renewals. If a machine must be renewed in all its parts, or thrown away after It a machine must be relewed in a first parts, or thrown tway after two months, or requires an engineer in constant attendance to maintain its efficiency, there must be a very decided disadvantage in the use of that machine, or great prejudice in the direction where used, or other machines would be tried and positive proof given as to which is the most effectual machine as well as most economical.

We are on the eve of seeing a much greater amount of explosives used in opening up levels than we have been accustomed to. With dynamic at 2s, per pound it is not improbable when having machine at 2s, per pound it is not improbable when having machine.

dynamite at 2s. per pound it is not improbable when boring ma-chines are fully adopted, the cost of explosives will equal the cost of boring, and, to use a comparative expression, the rock will be burnt out. If three or four times the progress be made it matters little how it is done, time being the great object in mining. Let us hope that the actual cost incurred by each machine will be laid before the mining world, that a sound decision may be arrived at as to the best machines to be used.

as to the best machines to be used.

The committee of Wheal Agar are about putting in a 20-inch horizontal engine, for the purpose of working a compressive capable of driving five or six of Darlington's drills, to be used in sinking shafts and driving ends. This engine will be used exclusively for compressing air, so there will be none of the interruptions from disconnecting which formerly interfered with their continuous working. H. W.

#### PATENT POLE-HEAD FOR CARRIAGES.

which I am the sole agent, and I crave your indulgence in offering some remarks upon its nature and utility. As many scientific and commercial gentlemen, and more particularly owners of horses used in drawing carriages and other vehicles, have visited my office and inspected the model which is placed there, and in no instance expressed a hostile criticism. I am emboldened to ask for your insertion of this letter. The designation of the invention is Colverd's patent carriage-pole head; it is placed on the pole-head of carriage, omnibus, cart, wagon, &c., can be removed at pleasure, is cheap and omnibus, cart, wagon, &c. can be removed at pleasure, is cheap and durable, and is ingeniously simple and efficient in construction and action. The model of a landau drawn by a pair of horses with the patent head attached to the pole stands at my office, and can be inspected and handled by any person desirous of ascertaining the merits of the invention. The model affords a very complete oppor-tunity of testing the adaptation of the instrument, and how it would

merits of the invention. The moder absorate very complete opportunity of testing the adaptation of the instrument, and how it would operate in actual experiment.

The patentee's attention was directed to the very great frequency of draft horses falling in the streets of London, especially upon asphalte and wood-paved street ways, and the accidents occasioned in very numerous instances by such occurrences. Sometimes the driver is precipitated to the ground, or upon his horse, and bruised, kicked, or otherwise seriously, perhaps fatally, injured. Approaching or passing carriages and horses even pa-sengers are not unfrequently injured. The carriage or other vehicle which is drawn by the horses which fall, or one of them, is often damaged and the harness torn, poles broken, and hames and turrets wrenched. The horse that falls is likely to bring down his companion, or in kicking and plunging in endeavouring to get up or get loose, injures it as well as hims-lf. Thus, much property is imperilled, the public traffic impeded, and passengers delayed, most probably at hours of the day when in our busy London their free course is infinit-ly valuable. Mr. Colverd's patent carriage pole head obviates these disasters. Before any further mischief can ensue the animals are released from the harness, and all the struggle, uproar, crowding, confusion, and danger which we see not only daily but hourly in our streets is avoided. harness, and all the struggle, uproar, crowding, confusion, and danger which we see not only daily but hourly in our streets is avoided. The patrons and friends of the Society for the Prevention of

Cruelty to Animals may well give attention and encouragement to this invention. I would earnestly recommend it to the notice of the London Omnibus Company, owners of other omnibusses than those which belong to that association, tramway companies, brewers, the Messrs. Pickford and Co., the possessors of fast light wagons, pleasure excursion vans and waggonetes, railway companies, as well as to those who engage heavy teams for whatever purposes. For gentlemen's carriages of all kinds it is a desideratum. The "head" can be fitted to carriage poles of all sizes. If these statements be correct then a most beneficial, and indeed beneficient, instrument is introduced to the public, which it becomes desirable that owners and drivers of vehicles should investigate. The General Post Office would find this admirable little construction of much service to the rapidly moved vans for letters, parcels, and newspapers. For carriages designed for the removal of invalids to hospitals and elsewhere one might pronounce it indispensable.

Not only can a model be seen at my office, as perfect as anything

can be of its kind, but I shall send a pattern for inspection to any

owner of carriages or other vehicles who may request me to do so, or to the secretaries of omnibus or tramway companies in town or country, and the post office and police authorities.

As the patent pole head entirely consists of metal, and its extensive use will promote the interests of metal manufacturers, which your Journal so well represents, I hope I am not presuming too far in asking for the insertion of my letter in your columns, which will oblige

Sole Agent for Colverd's Patent Pole Head for Carriages.

St. Swithin's lane, City, April 3.

St. Swithin's lane, City, April 3.

#### CAPT. JOE ODGERS.

CAPT. JOE ODGERS,

SIR,—About 30 or more years ago your readers, including myselfwere greatly amused for several weeks by a recital in the Mining
Journal of the numerous anecdotes of the late Capt. Joseph Odgers's
life. I did not know him personally, but I have heard and read
pretty much of his peculiarities and eccentricities. I should be
pleased to see a reproduction of the papers on Capt. Odgers, to
which I have referred, that the present readers of your Journal may
be amused, most of them being new since the date of the publication. Many of the readers of the Mining Journal have seen in the
Commercial Hotel, Camborne (late Matthews's, now Rogers's), the
painting by Opie, which has gone by the name of "The Halter Pie."
It represents the old captain in the act of opening the pie in which
he found a halter, and the waiter is shown as looking in at the door.
The anecdote as given in the Journal is highly amusing. The pieture was purchased at an auction by Capt. R. Pryor for Mr. H. L.
Phillips, F.G.S., of London. When Capt. Pryor was in Wales he
met with a copy, and purchased it. No other copy, I understand,
exists. I was told that a photographer offered a large sum for permission to copy, but consent was not given. R. Symons.

Truro, April 4.

#### Meetings of Bublic Companies.

#### JAVALI COMPANY.

The ninth ordinary meeting of shareholders was held at the offices

The ninth ordinary meeting of shareholders was held at the offices of the company, 32, St. Swithen's-lane, on Wednesday, Rear-Admiral Sir Leopold G. Heatt, K.C.B., in the chair. Mr. Edward Schubert (the secretary) having read the notice convening the meeting, the report and accounts were taken as read. The Chairman said the shareholders would, probably, have read the report which had'been submitted to them with mingled feelings of satisfaction and regret, satisfaction that the company had fully and completely turned the corner, and that satisfaction would, perhaps, be tempered with some little regret that so little progress had been made along this new road. The reasons for this slow progress were fully stated in the directors' report. The fact was that the seasons seemed to have been altogether out of joint. There had been a water famine in the East and a water famine in the West, whilst we, in England, had been over-drenched with the amount of rain that had fallen. So far as the company was concerned, the worst of this state of things was that expecting the rainy season to break up in March the manager had no fuel in hand when it broke up in November. He had now written that he had three months' stores in hand the litter the season in head her the reason stores in hand the litter was the contents. up in November. He had now written that he had three months' stores in hand, but at the same time he (the Chairman) was sorry to say that the water at the mine was so scarce as to be barely enough for the washing and the ordinary manipulation of the ores. to say that the water at the mine was so scarce as to be barely enough for the washing and the ordinary manipulation of the ores, so that they could not prophecy what might happen between the present time and the commencement of the next wet season. The next was the most important paragraph in the report, as it referred to the expenditure on capital account. The shareholders would remember that when he first joined the board he informed them that he would spend every penny upon which he could lay his hands in improving the plant and machinery at the mine. (Hear, hear,) The board had carried out that policy with great energy, and during the last two years they had spent 5000% on capital account. This money had been scraped together partly by subscriptions from the shareholders and partly by the working profits. With that 5000% they had completed the erection of ten stamps which had been lying idle for want of money to complete them. These stamps had been purchased several years ago, but had only been recently erected. Besides this, a large steam-engine had been erected, a tailing-mill had been finished, the system of their traumways had been improved, assaying plant had been sent out and an assayer to use it, and the directors hoped that the time had now come to hold their hands, and see what revenue could be obtained from the thirty stamps now in use. The shareholders were informed last half-year that in the opinion of the directors the time had gone by for continuing to collect money in driblets from the dareholders, and that if they were to increase the works they must wait until they could show such an amount of profit as would bring the shares to par, so as to enable the directors to raise a real capital account to be spent on improvements and extensions. The extrapagraph in the report snow such a mount of print as would bring the shares to par, so as to enable the directors to raise a real capital account to be spent on improvements and extensions. The next paragraph in the report referred to the appointment of Mr. Hennecke. The shareholders were probably aware that the engagement with Capt. Sohns would expire in May—next month. Capt. Sohns would remain at the mine at least one month more to see the result of the triling-mill and the progress made by Mr. Hennecke as reduction officer, and when he (Capt. Sohns) came home it would be pregressive to make a freeh progress made by Mr. Hennecke as reduction officer, and when he (Capt. Sohns) came home it would be necessary to make a fresh agreement with him, or to make some other arrangements for the management of the mine. In the meantime, it was hopel that Mr. Hennecke would be very useful as reduction officer, and that he would learn the working of the mine. It was also hoped that arrangements would be made in which Mr. Hennecke would have a place during the absence of Capt. Sohns, or, at all events, until permanent arrangements could be made. He would now call the attention of the shareholders to the tables which had been inserted at the end of the report. The first table simply gave the amount of work done monthly, and upon that he had no remark to make, except to mention that the reasons of the very low return in April were mentioned in the report. In November and December there and also been a falling off, just when it was thought that the returns for each of those months would amount to from 1500% to 1700%. The second taking of, just when it was thought that the returns for each of those months would amount to from 1500*l*. to 1700*l*. The second table would, he felt sure, be gratifying to the shareholders, as from it it would be seen that in four years the amount of ore crushed had been doubled, and that the value had also been doubled, while the working expenses had not increased more than 50 per cent. The working expenses for 1876 were shown in the table as having been actually lower than those of 1875, but in reality this was not so. this was not so. The decrease arose almost entirely from the gain which had been paid by sending out money at the present low price of silver, instead of drawing bills at the mine. By this means a saving of about 600th had been effected, and as the auditor did not like to show that as a profit the amount was deducted from the expenses of working the mine; and, therefore, the apparent diminution was not owing to any economy at the mine itself but to the atom. was not owing to any economy at the mine itself, but to the state was not owing to any economy at the mine itself, but to the state of the silver market, and the fact of the company having been able to take advantage of the low price of silver. The next column referred to the value realised, and this was not of so favourable a character. In 1873 the value realised for each ton of ore crushed was 17s. 6d., in 1874 it was 19s., in 1875 18s. 2d., and in 1876 only 16s. 31. The only point of satisfaction was that the value per ton had slightly improved, the value now being 16s. 3d. per ton, against the 16s. 2d. per ton mentioned at the last half-yearly meeting. The working expenses had decreased from 17s. 1d. per ton in 1873 to 12s. per ton in 1876, and the gain had risen 4s. 5d. per ton, for in 1873 there was a loss of 2d. per ton, and the gain was for 1876 4s. 3d. per ton. This was a very satisfactory progress, and promised well for the future. The accounts he thought needed no comment. They were made up in the usual form, but there was a novelty in the shape of a profit and loss account, which he hoped would be a much better one at the next meeting.

Lord George Paget asked for information with respect to the inferior fuel, from the use of which the low results of the stamping were partly attributed?

The Charmax in reply, said the fuel had been piled in stock for two years, and har got baked and deteriorated during that time.

The Charmax hen moved the adoption of the report and accounts.—Mr. Charmas Green seconded the motion.

A Shareholder asked whether anything could be said about the prospects of any having been able The next column re-

the mine?——The CHAIRMAN said, in reply, that the best answer he could give to that question was to ask the shareholders to judge from the past what the future of the company would probably be. He could not foretel what would happen, but having the facts before them the shareholders could form an opinion of the matter. There were now 30 stamps erected and a large steam-engine, and ju iging from the past he thought that the gross returns of the current year would be 17,000. The Shareholder said in asking the question he wished to know whether there levels, and the reserves.

The Chairman replied that for some time they had been working almost entirely at surface.

tirely at surface.

Lord GEORGE PAGET asked if the expenses would be increased when the workings were at a greater depth?—The CHARMAN hoped that the labour-saving machinery which had been put up would soon come into play. It was expected that the drum and steel-wire for working the cars up and down an inclined plane would save 10%, per month in the labour cost.

Mr. Dinewall saked if it was expected that Capt. Sohns would continue to serve the company?—The CHARMAN replied that at present the directors had no means of judging whether or not Captain Sohns would be re-engaged as the manager at the mine. He still retained his shares in the mine.

The report and accounts were then unadimonaly adopted.

The report and accounts were then unadimously adopted.

On the motion of Mr. DINGWALL. seconded by Lovi G. PAGET, the Chairman ras re-elected. Mr. Chairs Frewer was re-appointed auditor.

The proceedings terminated with a vote of thanks to the Chairman and directors.

#### LONDON AND CALIFORNIA MINING COMPANY.

The eleventh ordinary general meeting of shareholders was held, at the City Terminus Hotel, Cannon-street, on Thursday,
Mr. Lewis R. Price in the chair.

Mr. Lewis R. Price in the chair.

Mr. John Saul (the secretary) having read the notice convening the meeting, the report and accounts were taken as read.

The Chairman said the shareholders would have seen by the accounts that the balance at the credit of the profit and loss account, which last half-year stood at 16,1454.7s., had now been increased to 19,7464.13s. 6d., showing a net earning of 36014. 6s. 6d. during the past six months. This result had been produced from 2335 tons of ore, which gave an average yield of \$21 61 cents per ton, or rather better than \$35 per ton than the average yield of the ore produced in the previous six months. The expenses were about 35 per cent, but this was no criterion of what the expenses of the mine could be reduced to, inasmuch as a large amount of prospecting work had reduced to, inasmuch as a large amount of prospecting work had been done, although the amount of ore milled was only 2335 tons. During the half-year nearly 6000% had been spent on materials, &c. The news from the mine was better than any hitherto received. the news from the mine was better than any fitherto received. (Hear, hear.) The latest dates of advices from the mine, contained in the directors' report, went down to February 28, which stated that "In the bottom of the east shaft a kindly black slate was encountered in the hanging-wall, but there is no change perceptible in the vein." The tone of the agent's report was eridently much more cheerful and promising than any of the reports which had previously been received. The operations at the mine were of so simple a charge. caeerful and promising than any of the reports which had previously been received. The operations at the mine were of so simple a character that they would scarcely have needed any explanation were it not that there were two points at which operations were being conducted, and upon which their hopes were fixed, which were totally distinct one from the other. On one side of their property they had the Bunker Hill, and on the other side the Keystone Amador. When the workings were extended in the direction of the Bunker Hill Mine a fair quantity of very good ore was discovered in the stopes, in fact all the ore which had been accumulated had been derived from that course, but they were stopped by the limits of their property on the Bunker Hill side, and it was not very satisfying to find that the lode on which they had been working ran off into their neighbour's property. Recently, however, in the direction of the Keystone Amador Mine they had found in what was called the "South-East" level at a depth of between 200 and 300 ft, below the surface, a lode which has since widened out and amplified, and had now proved to be a continuous vein. This would, doubtless, be a source of considerable profit, as there was a large space of unworked ground to be developed there. Mr. Johns telegraphed on March 18 that there was some years one in sight. The information thus received from Mr. Johns surprised the directors very much, as they could not imagine that in so short a time after the discovery of the vain enough of the same veers working could have been received. The operations at the mine were of so simple a cha much, as they could not imagine that in so short a time after the discovery of the vein enough ore for some years working could have been obtained, for one year's operations would represent 10,000 tons of stuff. The directors, therefore, asked for an explanation, and the fact was that enough ore for one year's stamping with ten stamps had been obtained, and this had, he understood, disappointed some of the shareholders. However, telegraphic information had been resided of an improvement in the appearance of the nonned some of the salenomers. However, telegraphic informa-tion had been received of an improvement in the appearance of the shaft and the Gulch level, which was to a certain extent, in his opinion, a compensating statement. With regard to the east drift, the agents stated in their report "That the dritt going northerly will connect with the vein in the big bulge of the ledge at the north end of the second level, before alluded to, we have not much doubt assuming such to be the case, so have here a shoot of ore nearly 200 ft in length which gives much encouragement for the future." 300 ft. in lengh, which gives much encouragement for the future This would be a very large body of ore, but nothing definite could be said of the matter until more work had been done at this point. Some time ago a vein was discovered called the "East" vein, and the directors had often mentioned that a shaft was commenced to be sunk on this vein to see if there was any ore. The Gulch level, which was going toward the Bunker Hill Mine, was curved round to the set a sate are hely us to get this lade at a darth of shout 400 ft. which was going toward the Bunker Hill Mine, was curved round to the east, so as to enable us to cut this lode at a d-pth of about 400 ft. from surface at the same time as the sinking of the shaft was continued, so that the lode could be more quickly developed. The agents' report on this did not give any great hopes. Up to Feb. 28 the results had been rather tantalising, as occasionally some very good stones were found. With regard to the Gulch level, there had never been anything found except a little string of gold, which counted for nothing. It was satisfying, therefore, to find that Mr. Johns (who at one time, and very recently, had rather suggested the propriety of suspending the sinking of the shaft altogether as a matter of economy, and leaving the testing of that lode to be done underneath, showing that he had a poor opinion of its prospects) should now think it worth while to telegraph that there had been an improvement in the shaft and in the gulch level. This was certainly improvement in the shaft and in the gulch level. This was certainly encouraging, for if a bunch of ore were discovered here it would be in a part of the mine which had not previously yielded anything At the previous meeting the directors were asked to take legal advice as to the right of the directors to dispose of the funds in hand as profits, and a case was submitted to counsel. The opinion given varied from the advice the directors had previously received. It stated that the point was quite unsettled as a legal point, but there was a Bill before Parliament which, if passed, would no doubt probably relieve the directors from the difficulty of acting in such a case, and the directors were strongly recommended to postpone for the present any action. In view of the improved condition of the mine, the directors thought that, apart from any legal consideration, this money should not be divided among the shareholders, for the payment of one shilling per share could not be of such interest to them as the securing of the proper development of the mine. (Hear, hear.) The money in hand was yielding a small rate of interest, and it was thought better that if the mine should prove to be of sufficient value to develope properly they should have improvement in the shaft and in the gulch level. This was certainly prove to be of sufficient value to develope properly they should have the means in hand to carry out that development. (Hear, hear.) There was no reason why the original Amador Mine should not repay them for all their outlay for the Key-tone Amador, their neighbour, had he believed given \$2,000,000. Without being too sanguine, there was reason to hope for favourable results in the case of this company, for although the reports were not very flourishing they were better than they had previously received. During the years in which they had been working it had been a most p-inful labour to the directors that they had not been able to make any return for the charakeldors. The directors were all large sharpholders them. the shareholders. The directors were all large shareholders themselves, but they had looked less at their own losses than at those the shareholders had had to bear. (Hear, hear.) The last telegram, dated April 3, was received on Wednesday, stating that the estimated clean-up of the Amador was \$8000, and that the prospects of the mine were more encouraging of late improving. In conclusion, the Clearing moved the adoption of the report and accounts.

the mine were more encouraging of late improving. In conclusion, the Chairman moved the adoption of the report and accounts.

Mr. CHARLES WRIGHT seconded the motion.

Mr. TRADRON thought it would be satisfactory if the shareholders were informed that the error in the telegram as to the amount of ore discovered was not due to their agents, but to the telegraph officials.

The CHAIRMAN replied that the only information the directors had was that the telegram was mis-sent—whether by the agents or the telegraph officials they were add aware.

which had been placed before them. It was certainly of a more encouraging nature than anything previously received, and he only wished to express on the part of himself and of some shareholders to whom he had spoken his full concurrence in the policy the Chairman had announced—as to the retention of the profit in hand. (Hear, hear.) The Chairman had mentioned that profit as only sufficient to give the shareholders is per share, but if his own calculations were right the profit realised was something like 2s. 6d. per share, if it could be divided. He thought they might hope for better discoveries as they descended, for he believed that the Keystone Amador made its large profits at a considerably greater depth than this company had reached in its workings.

The CHAIRMAN: That is quite so.
Capt. CRAGIE congratulated the shareholders on their improved prospects, considering that the new discoveries would be of great interest, and that something continuous would be found in the centre of their property. He thought the shareholders were much indebted to the board for their sonduct of the affairs of the company in the difficult and troublesome position in which it had been.

The CHAIRMAN, after expressing the thanks of the board for the remarks which had been made, remarked that in referring to the possible division of 1s, per share, he had a mental reservation taking half the money to work the mine. He did not intend to say that the mine had only carned sufficient to pay 1s, per shave. He was very glad that the policy recommended by the board had met with so much approval.

The report and accounts were then adopted.

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e report and accounts were then adopted.

the motion of Mr. TENDRON, seconded by Mr. McDOUGALL, a vote of thanks
passed to the Chairman and directors, and the meeting then separated.

#### SIERRA BUTTES GOLD MINING COMPANY.

The 14th ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Thursday,

Mr. Lewis R. Price in the chair.

The notice calling the meeting was read by Mr. John Saul, the secretary, and the report of the directors was taken as read.

The CHAIPMAN said that the general features and character of the Sterra Buttes Mine had remained so much the same during the past half-year, that they offered year little upon which he could comment. Sierra Buttes Mine had remained so much the same during the past half-year that they offered very little upon which he could commer texcept upon those points which could not be entered fully into in the directors' report, so as not to make it too voluminous. The earnings had been 90601. 13s. 1d. for the last half year. This half year they had been 12,1494.9s. 1d., and for the corresponding half of 1875—that was to say for the six months ending Dec, 31, 1875—they were 10,6291 16s. 4d. The yield of ore was a trifle under the average; in 1875 it was \$6½; in the first part of 1876, \$6:39; and in the second half of 1876, \$6:32. The increase, therefore, in the productiveness of the mine, taking even the second half of 1875—namely, comparing the 10,6291. against 12,1491.—showed a difference of about 16001., which was due to economy and efficient working, and not to an inwhich was due to economy and efficient working, and not to an increase of ore, which had rather declined than improved. There had been an outlay of about 800% for various improvements on the mine, which had come out of revenue. There had been a wheel put up and a road constructed to facilitate the carrying of the timber; 3004, has been spent in surveys and legal proceedings in connection with the acquisition of timber lands, and 3004, had been spent on with the acquisition of timber lands, and 390%, had been spent on flumes. There had been a sum of 3036%, spent on the purchase of the Independence Mine. Hearing that the property was about to change hands the directors instructed their agents—Messrs. Cross and Co.—to purchase, if possible, the water rights, in order to prevent any conflict with new comers, who might have bought the rights over this company's head merely for the purpose of exacting heavy black mail for the use of the water. The directors, he regretted to say were not in a position at present to spend a large sum black that for the use of the water. The directors, he regreted to say, were not in a position at present to spend a large sum upon this, and therefore the agents were limited, as a maximum, to the expenditure of 1000%. The reply was that the water rights, being the really valuable portion connected with the mine, would not be sold alone, and any attempt to purchase it separately would enhance its value enormously in the market, but the agents suggested that they might be able to negociate for the whole concern at the sale upon such terms as would come within the limit sufficiently. Thereupon such terms as would come within the limits ultimately. Therefore the property had been purchased for 3036£, and there would also be another 300£ or 400£ to pay, which would bring it up altogether to about 3500£, for which this company obtained the Independence Mine, the machinery, surface works, and the use of the water, which latter was what the directors most coveted. He believed some of the machinery was applicable to the Sierra Buttes and some to the Plumas Eureka, and therefore the sum remaining, which might be taken as the cost of the water, would come within the limits of the 1000L; therefore, if even the mine were unproductive and worthless, the agents had made a very good purchase for the company. (Cheers.) As far as the directors were informed—from the history of the mine—it had never yet been worked at a profit, therefore the directors were not inclined to set any great store upon the mineas an acquisition and would not have nurchased. tore upon the mine as an acquisition, and would not have purchase it as a mine, but, having become its owners, it was desirable to see whether anything could be got out of it. The owners hitherto had laboured under the disadvantage of working through a shaft, which and not only entailed an expense for pumping and keeping the mine dry, but also an expense for hoisting the ore, as well as a great deal of the attle, or rubbish. If the directors now succeeded in doing anything with the mine it would be by the continued use of the 6th evel, with the view of tapping it at a considerable depth. Should they be successful in topping it with any decent amount and quality of ore, the adit or 6th level would not only allow the ore to be cheaply and economically brought out, but wou'd also have the adcheaply and economically brought out, but wou'd also have the advantage of draining the mine without any expense, and possibly ore which would not bear the expense of working through the shaft might be made profitable by being worked in the way indicated. (Hear, hear.) In the Sierra Buttes Mine there was no new discovery to announce, but, whilst they had nothing new to announce, it was highly satisfactory that the large quantity of ore which had been extracted f om the mine during the past six months had been replaced by the amount laid open, so they were in the same position as six months ago—there was no deterioration in the quantity, and the quality seemed to be rather better. The 7th level had not yet developed anything; that was nearly underneath the point which was called Tinney's rise, where they discovered a large quantity of good ore. It was thought that that ore had given out, but further exploration had shown a larger quantity than was anticipated. tity of good ore. It was thought that that ore had given out, but further exploration had shown a larger quantity then was anticipated, and it was thought that it would "make down" below into the 7th level. That 7th level had been run nearly up to that point, although they could not say exactly when it would cut the bunch of ore, as the form was somewhat irregular, and it was impossible to tell within 200 or 300 ft, where it would go. Mr. Johns was of opinion that it was possible that the pay ore might have gone off the vein in another direction, and to decide that point he was going to cross cut from the 7th level to see if he found any thing. On March 1 Mr. Johns wrote that they intended to run from Cliff ledge, the intention being to cut the two levels at the point of junction. Under Mr. Johns' management they were sure to have the utmost done to explore the mine, and, although Mr. Johns was economical, he did not scare expense in prospecting. If the mine offered no very brilliant future, it certainly offered the steady guarantee it had hitherto offered of a regular dividend, especially under the present explant in present executions. ne. (Cheers.) tion as six months ago, it might be said of the Plumas Eureka that it was doubled. The accounts called for little remark. There was 10,000, borrowed at the time the mine was yielding badly for the sake of purchasing the Mammoth property; since then it had been discovered that the mine had enormous value of itself, although the property was purchased more for the sake of working through the tunnel. Of this 10,000,30000, was paid off last year, 30000, was paid off in March, and 40000, would have to be paid off in March next year, according to arrangement. That was all the debt the company had of any kind. The amount carried forward—11,544. 4s. 7d.—existed principally in stores, which amounted to 35100, the remaining 20000, being cash in hand. It was important to bear in mind that beyond the net prain of the mine, it had also produced enough to pay for eight additional stamps, the erection of hoisting works, purchase of some timber land, and the making of roads, which involved a total expenditure of something like 35000, in the six months. These were all essential things, and in the judicious and economical carrying out of such works depended the fluture carrying on of the mine. The eight additional stamps had increased the fluture carrying on of the mine. The eight additional stamps had increased the milling power 800 tons per month, and increased the yield 70000, each half year. At page 29, under the heading of mill, they would see in October the mill gave \$32,000, the produce of 2800 tons, with 40 stamps, but after the eight stamps were added in December it milled 2300 tons, and produced nearly \$40,000, which was the increase he had just in dicated. The amount milled was considerably greater than in any previous six months, and the yield obtained was about \$12, which was obtained from a mixed ore, and not from a selected ore. This was highly important and satisfactory, as the ores were all worked up as they came out of the mine. In page 14, paragraph 4, paragraph and the received the page to the mine of the pag The accounts called for little

agents, but to the telegraph omess.

© Hairman replied that the only information the directors had was that the am was mis-sent—whether by the agents or the telegraph officials they were ware.

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"In sta

ing the ore has been of lower grade, will be greater than the probability of the increased cape and the decreased cost of extraction."

In the mill account there was a slight increase in the cost of mill see that the cost of the reduction per ton was stated at 1.23, or show that the cost of the reduction per ton was stated at 1.23, or show to work by steam. It was satisfetory to know that they had the could work up the good ores independently of the water. In the increase in the milling (which was short of \$1.50 per ton on the other expenses, and the company be gainers to the extent of about 4600. In the year. The tailing profit of about 4000. but this would vary according to the reduction, as they were continually making experiments with the via how they could be treated to the best advantage. The mine has extent of which the directors had no idea a year ago. With the wind the could work was not being run at the time the last half yearly re you. After taking charge of the mine. I started this tunnel on since extended it 152 ft. on the hanging wall part of the vein, will wild, and at the end of the first week fair average ore was reache about 20 ft. the vein had widened to about 7 ft., of medium quality of good size and quality until about the middle of September, to about 6 ft., with quality below the average. About the middle of Soot and quality until about the middle of September, to about 6 ft., with quality below the average. About the middle of Soot and quality until about the middle of September, to about 6 ft., with quality below the average. About the middle of Soot and quality until about the middle of September, to about 6 ft., and the about 20 ft. the vein had widened to about 7 ft., of medium quality from \$10 to \$12 per ton. You a though the vein is for a portion of the distance narrow, the other was a cross the about 20 ft. the vein had widened to work of the distance of improving in size and quality, and we look for a vein the first of the proper its tated in—

"Mr. Johns says in his report, the ough at the same time no doubt air, dones are buted very materially to the result. Next half yet duction in the cost of extracting the ore. In it has said it was almost unnecessary to remark the serous condition, and had a larger amount of actual net the head of expenses and profits he stated it Johns said it was almost unnecessary to remark that accrous condition, and had a larger amount of actual; Under the head of expenses and profits he stated the bealtered, and he could safely promise a monthly protect to the Lower Mammoth tunnel, Mr. Johns had let which 455 ft. had already been constructed up to the was to cut the body of ore which was coming down tunnel; hence the desirability of sinking to see if it of pinching out it had widened to 18 ft. of first class of which was coming out that of the distance there was every reaso down one-third of the distance there was every reaso down one-third of the distance there was every reason the body of ore continue in the Lower Mammoth; supply for years and years to come. He had not as seconomy displayed by Mr. Johns and his assistants; agement to be judged by results; those results were mised that they should be better. Mr. Johns had wroferedit was due to the underground managers, Mr. whom he was much indebted for the results obtained had borne testimony to the property being in good or this was largely attributable to the skilful and efficier and his able subordinates. The Eureka had benefit care that the shareholders might loss sight of what! Buttes Mine, where the ores were very poor, and any in the expenditure would tell more heavily than at En by some shareholder that the expenses were higher at: shareholder that the expe some shareholder that the expenses were highe t if they took the charge upon the mas of ore is lower, and unless the strictest economy was a dividend at all. The telegram received under a rescale stimated clean-up \$40,000, have buillion \$4 pecially Mar moth sheft." He thought there much could be said. (Cheers.) In conclusion adoption of the report and accounts. — Mr. J.

a share was declared on the shares of the ster April 14. motion of the Chairman, seconded by Mr was declared on the shares of the Plumas E share was declared on the shares of the Plumas Eureka Mine, do public after April 14. In the motion of Mr. Charles Wright, seconded by Mr. Frewer, it is

. Frice was re elected a director.

On the motion of Mr. Charles Wright, seconded by Mr. Ferwer, E.
eall was re-elected a director.

A cordial vote of thanks to the Chairman and directors closed the process.

#### FLAGSTAFF SILVER MINING COMPANY OF UTIL

An extraordinary general meeting of shareholders was leisted annon-street Hotel, on Thursday, Mr. W. C. HARVEY in the chair,

r the purpose of confirming the resolutions which were need to meeting held on March 14.

Mr. A. A. DE METZ (the secretary) read the notice count

meeting

The CHAIRMAN said he need not detain the meeting log, was the last meeting full explanations were given as to which cessary to make the alterations in the Articles. He would

coessary to make the Arterations in the Articles. In which we resolutions one by one, and would move that the following lution be confirmed:—

Resolved, that Article 2 of the Articles of Association be repulciased that the substitution for the same the following regulation be estimated that in substitution for the same the following regulation be estimated to the board may from time to time borrow for the use of theomographic control of the company of the company of the control of the control of exchange of the control of the my sure or sums of money which they me the company, but so that the total amount any one time shall be owing, shall not exceed secure the moneys already borrowed, or wi-part thereof, by a mortgage or mortgages parts or part thereof, to such person or per and in such manner and form in all respec-

resolution was confirmed:—"Reloiver, that Article 230 to be altered by expunging from the same the figures '43," in substitution for the same the figures '42."

The CHARMAN moved the confirmation of the following rethat there he added to the Articles of Association of the coafter Article 24, an Article in the words and figures following demand for a poll shall be in writing, signed by live or more the meeting, and delivered to the chairman at or before its poll is demanded it shall be taken either at the meeting, of a and in such manner as to conduct, scrutiny, duration, and chairman shall during the meeting direct, and in the absent sufficient direction by the chairman, then as the directors sharping the meeting the processing sufficient direction by the chairman, then as the directors sharping more if sometimes as designed to the content of the co sufficient direction by the chairman, then as the directors shall detection may, if requisite, be adjourned by the chairman to receive poll. The demand of a poll shall not prevent the continuous of a stansaction of any business other than the question on which a per manded. "—Mr. Pearson seconded the resolution. Mr. BOLTON asked whether the Articles should not specify the of holding the poll? —The Chairman said that would be fixed the poll being demanded.

The resolution was then confirmed.

On the motion of the Chairman, seconded by Mr. BOLTON, resolution was confirmed:—"Resolved, that Article 31 of the Articles the poll being demanded." The resolution that the confirmed is the poll being demanded.

In the poll being demanded. The resolution was confirmed to the confirmed to the poll being demanded. The resolution be altered by expunging from the same the words 'the confirmed the poll being t

ordinary resolution."

The CHAIRMAN next moved the confirmation of the following solved, that there be added to the Articles of Association, ack Article 36, an article in the words and figures following viz...

will directors shall be called upon to go abroad on the business of the belawful to the board to remunerate such director or directors.

any's tands, in addition to the remuneration provided by Article 32." "
say's tands, in addition to the previous occasion a payment had been that the previous occasion apayment had been a director for services on a journey to Utah, and some little doubt was a director such payment was quite legal, and, therefore, the directors to whether such payment was quite legal, and, therefore, the directors to whether such payment was quite legal, and, therefore, the directors is matter placed behond all doubt in the event of its being found necession send one of their number to Utah. — Mr. J. ELLIOTT seconded the

aced beliated in the property of the property

considered much wheeler it would with Mr. Elliott; at the same time he said he fully concurred with Mr. Elliott; at the same time he year the company was now in possession of the property, and the protein control with examination to be very valuable, and the mine was do upon further examination to be very valuable, and the mine was he are the read the rate of 60 tons per day, and there was great competitions of the one. There was no fear that Mr. Davis would ever in re-establishing himself in possession; and though the director in re-establishing himself in possession; and though the director or good money after bad, they would lose no opportunity of forcing or good money after bad, they would lose no opportunity of forcing Davis and Mr. Patrick the "plunder" which those gentlemen had

Davis and Mr. Farnes the property.

property.

Cas, in answer to a question by Mr. SNELL, said the company had the four answer to a question of the South Star and Titas Mine adjoining, which would presion of the South Star and Titas Mine adjoining, which would preside glaim from arising, and would also enable the company to follow the property. The property had been obtained on remarkable pider that property. The property had been obtained on remarkable with summary to the value and importance of the South Star street to this company, and several shareholders expressed an opinion as they had done the directors had pursued a wise and very pruss they had done the directors had pursued a wise and very prusately and the started the

gas now had that it was the intention of the directors to issue 30,000 max said that it was the intention of the liabilities, and provide the short working capital which it had hitherto lacked. The rate of the terms of issue would shortly be made known to the shareholders make to the Chairman and board closed the proceedings.

#### GREAT LAXEY MINING COMPANY (LIMITED).

Malf-yearly general meeting of shareholders will be held at the sminus Hotel, London, on Wednesday, when the following

yearly general meeting of shareholders will be beld at the just Hotel, London, on Wednesdây, when the following eport will be presented:—

\_The favourable results of the past six months' work-continued prosperity of the mine generally, makes it a teath of the pear of the Deep Mine. During the past half-year a communication of the 255 fm. level between the engine and Welch shaft, which has millition, and enabled us to resume sinking the Welch shaft, after east preparatory work, cutting out ground, timbering, &c. Simulabesishing of the shaft a lodge is being cut, and the whole is now her her side of the shaft a lodge is being cut, and the whole is now her her side of the shaft a lodge is being cut, and the whole is now her her side of some promise is gone down in the 200. The same level, going south of engine-shaft, fathoms, the lode is without material change: the end is, however, spint where a lode of some promise is gone down in the 200. The same her went her work of the shaft, is driven 25 fathoms, No. 1 winz; the level has been passing through a lode varying in an we expected, which remark will also apply to the end at presever, the lode is not opened to its full width. When done, and from the disturbed ground caused by a small slide, we have little will be found less fluctuating and increasingly valuable. No. 2 when the sufficiently opened below and in driving the ends in, which is on an average about 70¢, per fathom. The 23c north is dot to 210 winze, and now 12 fathoms beyond it; here also the in value, from comparatively poor in places to 35¢, per fathom, at 20¢, per fathom. The end at present is sworth 12½ per fathom. It would be a sufficiently opened below and in driving the ends in, which is on an average about 70¢, per fathom. Supply to the province of is worth 25¢ per fathom, and No. 2 stope 15¢ per fathom. 120¢ per fathom, and the more of is worth 25¢ per fathom, and the more of is worth 25¢ per fathom, and the well of the supply and the s

releval to the character of the lode in the 140, and its position with respect to the 110 fathorn level and the 125 feb., and its position with respect to the 110 fathorn level and the 125 feb., and its position with respect to the 110 fathorn level and the 125 feb., and its position with respect to the 110 fathorn level and the 125 feb., and its position with respect to the 110 fathorn level and the 125 feb., and will not occupy much time. The locomotives will be formed and considered and consid

used this far to the engine and Welch shafts while the remainder of the level to Dumbell's shaft is being prepared. The locomotives are now awaiting shipment per our own steamer at Swansea. The result of the trials upon various branches or joints in the Glen Adit level in the past six months have gone to show that the one about 50 fms. from the mouth approaches nearest the character of a regular vein. We have opened upon it about 4 fms. on its course, which does not exactly agree with the bearing of Luxey lode, though not far from it. We consider it is fully deserving a further trial, and into ground undisturbed by the slide upon which the adit cross-cut is driven. At the surface the material for strengthening the big wheel is nearly ready for putting up. A new turning lathe and screwing machine (the latter made on the mine) have been added to the new machinery. They do their work efficiently, and are a great saving of time and expense. Two additional sets of self-acting jiggers for the washing floors are also being prepared; one set will very shortly be in use. The sharcholders of Great Luxey may still congratulate themselves upon the thoroughly sound condition of their property, and no effort shall be spared on our part to turn it to the best possible account.—F. Reduct. Free, W. H. Rowe.

The half-yearly statement of accounts, ending Feb. 2, has been issued to the shareholders pending the forthcoming annual general

The half-yearly statement of accounts, ending Feb. 2, has been issued to the shareholders pending the forthcoming annual general meeting. The income for the half-year, including a balance of 9887l. 1s. 7d. from the previous account, amounted to 51,168l. 9s. 9d. The sales of ore had realised 41,195l. 5s., of which lead produced 26,005l., and blende 15,190l. 5s. The cost of labour for the six months had been 14,220l. 9s. 10d.; merchants' bills, 3575l. 12s. 8d.; royalty, 3795l. 12s. 1d.; freight and insurance, 1651l. 12s. 11d.; dividends and bonuses, 15,000l.; and amount to reserve fund, 2500l. The reserve fund now amounts to 5680l. The stock of ore on hand is valued at 19.371l. The balance carried forward, after paying all expenses, 9281l. 18s. 1d. expenses, 9281l. 18s. 1d.

WHEAL NEWTON.—The statutory meeting of this company was held at Holmbush House, near Callington, on Wednesday. Mr. D. Roberts in the chair. The secretary having read the notice convening the meeting the report of the directors was submitted, with a statement of accounts to March 31, from which it appeared that the costs of the mine for the quarter had amounted to 509l. 48. 3d. against proceeds of 819l. 7s. 2d. derived from the sales of silver, copper, and cupreous arsenical ores. Out of this the directors recommended the sum of 89l. to be carried to reserve, and a dividend to be declared at the rate of 10 per cent. per annum. The report also stated that the new silver discovery had been proved at points on the lode 100 fms. apart, and that upwards of 6 tons of silver ore had already been brought to surface, a fair proportion of which assayed over 1000 ozs to the ton. The following resolutions were then unanimously passed:—"That the report and accounts submitted to the meeting by the directors be received and adopted, and that a dividend at the rate of 10 per cent, per annum for the quarter ending March 31, 1877. be declared on the company's paid-up capital, and be made payable on and after the 20th instant.—That Mr. D. E. Solomon, of 19, 8t. Swithin's lane, London, E.C., public accountant, be elected anditor of the company for the current year." A vote of thanks to the Chairman and directors terminated the proceedings. WHEAL NEWTON.-The statutory meeting of this company was

GREENHILL.—The statutory meeting of this company was held at Holmbush House, near Callington, on Wednesday, Mr. D. Roberts in the chair. The secretary having read the notice convening the meeting, the report of the direct rs was submitted, with a statement meeting, the report of the direct rs was submitted, with a statement of accounts to the 31st ult., from which it appeared that the purchases of raw materials and the trading and manufacturing costs had amounted to 524%. 8s. 2d., against 544%. 15s. 1d., represented by products made and sold, consisting of arsenic, calcined ores, and fire goods. The balance of 400. 6s. 11d. thus appearing to the credit of profit and loss was recommended to be dealt with by placing 194. to reserve and paying a dividend at the rate of 5 percent, per annum. The directors also stated that if the general aspect of commercial affairs were to improve they estimated that by continuing to do only the same amount of business as heretofore, the quarterly profits would be upwards of 2000. The following resolutions were then unanimously passed:—"That the report and accounts submitted to the meeting by the directors be received and adopted, and that a dividend at the rate of 5 per cent, per annum for the quarter ending March 31, 1877, be declared on the company's paid up capital, and be made payable on and after the 20th inst.;" and "that Mr. D. E. Solomon, of 19, St. Swithin's lane, London, E.C., public accountant, be elected auditor of the company for the current year." A vote of thanks to the Chairman and directors terminated the proceedings.

A vote of thanks to the Chairman and directors terminated the proceedings.

HOLMBUSH — The statutory meeting of this company was held at Holmbush House, near Callington, on Wednesday, Mr. D. R. berts in the chair. The secretary having read the notice convening the meeting, the report of the directors was submitted, with a statement of accounts to the 31st ult., from which it appeared that the trade profits of the mine for the months of January, February, and March had been 4301.18s. 74, 4384, 12s. 11d., and 1010, 4s. 8d. respectively; that the premium realised by the sale of shares had amounted to 8192.0s. 6d., which had all been carried to reserve, together with contributions of 3351 for the trading account; that several valuable discoveries had recently been made, and that further discoveries were expected at an early date. The following resolutions were then unanimously passed:—"That the report and accounts submitted to the meeting by the directors be received and adopted, and that a third monthly divided at the rate of 30 per cent, per annum on the commany's paid-up capital be declared, and he made payable on and after April 20." "That Mr. D. E. Solomon, 19, 8t. Swithin's-lane, E. C., public accountant, be elected auditor to the company for the current year." A vote of thanks to the Chairman and directors terminated the proceedings.

proceedings.

THE EMMA MINE.—A meeting was held in Glasgow, on Tuesday, of the principal shareholders in the Emma Mine. There was a large attendance. Full and satisfactory accounts were given of the position and prospects of the jury trial going on in the United States Courts against Messrs. Park and Baxter for fraud in connection with the sale of the mine. From the statements made, it appears that the directors are assured, both by their English and American counsel, that the prospects of success are very encouraging if the trial be vigorously prosecuted to a conclusion. The following resolutions were proposed, and unanimously carried:—(1) That this meeting approve of the proceedings debyted hitherto by the directors in prosecuting Messrs. Park and Baxter in the United States Courts, and with the view of providing funds to carry on the trial to a conclusion, resolve to subscribe to the nsw issue of debentures of 1% each (issued at IA), and recommend the other shareholders also to subscribe to these debentures for that purpose; and (2) that this resolution be forwarded to the shareholders with the request that that they will communicate to the Chairman without delay the extent to which they will subscribe to the debentures. will communicate to the subscribe to the debentures

#### THE VAN MINE-MONTHLY REPORT.

April 4.-The 105, east of shaft, is driving by the side of the lode; we put a blast into the hanging of the lode to-day to try it, which broke some very good orestuff; when we have driven a little further east we shall cross-cut into the lode to prove its value. The same level west of shaft shows a little lead and blende, but not sufficient level west of shaft shows a little lead and blende, but not sufficient to value at present end; we expect an improvement in this end shortly, as we are approaching the ore ground seen going down on the bottom of the 90 west. The lode in the 90, west of shaft, is worth 34. per cubic fathom for lead ore. The tripping of the lode to full width in the side of this level at the respective points 40, 30, and 8 fms west of shaft, are worth on the average 31. per cubic fathom for lead ore. The lode in the present end of the 90, cast of shaft, is worth for lead and blende 13. per cubic fathom. The 75, west of shaft, is still pushed forward by the side of the lode; we shall again cross north to prove the value and width of lode in the course of this month. The stopes in the back of this level, nine in number, are worth on the average for lead ore 30. 10s, per cubic fathom; average width 18 ft. 6 in. The 75, east of shaft, is now driving by the side of the lode; after a few fathoms more driving we shall cross north to prove the width and value of the lode. The stripping of the lode to full width in the side of this level, at a point about 10 fms, east of shaft, is worth 29. per cubic fathom; mean width of lode 29 feet. The 60 cast is continued by the side of the lode. The stripping of the lode to full width in the side of the lode so as is continued by the side of the lode. The stripping of the dode ore; average width 17 feet. The 50 cast is continued by the side of the lode. The stripping of the follow of the side of the lode. The stripping of the follow of the side of the lode. The stripping of the follow of the side of the lode. The stripping of the follow of the side of the lode. The stripping of the side of the lode of the side of the lode. The stripping of the side of the lode of the side of the lode of the side of the lode. The stripping of the side of the lode of the side of the lode of the side of the lode. The stripping of the side of the lode of the side of the lode of the lode of the side of the lode. The stri

at this point the lode is found to be better than was anticipated. The former parties drove 20 fms. eastward in this level. 13 fms. of the distance being on the course of the lode, and 7 fms. by the side of the lode, which is left standing for this length. The lode has

directly, when returns of lead will be resumed, and it is believed that the original shareholders who have taken shares in the new company will recoup the money they have lost. If this be so the new subscribers will be well rewarded. The mine has been inspected and reported on by reliable authorities, who hold out strong hopes as to its prosperous future, especially as they have an energetic, and in every sense competent, man at the head of their affairs.—Carnarvon and Denbiah Herald.

#### MINES OF WEALTH.

THE ESGAIR-HIR SILVER LEAD AND ESGAIR-FFRAITH COPPER MINES (CARDIGANSHIRE).

There can be little doubt that these mines were amongst the first worked in this country, and that they were worked by the ancient Britons at a very remote period we seem to have ample proof, not only in the old relics found in the most ancient mines, but we may also form a pretty correct surmise as to the purposes the metal extracted was applied. The annals of the original discovery, and the development of the work upon the metallic veins of Cardiganshire, are lost in obscurity. There can be no question (or, least, there is none on my mind) that the oldest excavations and workings were made on copper lodes, or, more properly speaking, where the cre of

are lost in obscurity. There can be no question (or, least, there is none on my mind) that the oldest excavations and workings were made on copper lodes, or, more properly speaking, where the cre of this metal may be said to have cropped out at surface; and it is somewhat remarkable that in this country this has been the case in three of the richest mines ever yet discovered in it, and have yielded metallic ores to the value of from six to seven million pounds sterling. The three mines alluded to are the Copper Hill, at Old Comystwith, the eastern portion of the Great Darren, and Esgair-Fraith Mines, the latter being the eastern portion of the very extensive grant of which I am now treating. By far the richest copper ore has been found in this sett, and, moving on from the time of the ancient to the modern Britons, it may not be amiss to state here that the last parcel of this ore sold realised 25t. 10s. per ton, or equally as rich in produce as the Cape ore. The tools found in these mines, of which a large quantity have been seen, have been in very shallow workings; and principally on the backs of the lodes here mentioned are stones brought from the sea beach, and varying in length from 6 in. to 9 in., and in breadth from 2 in. to 3 in., marked round the centre, evidently caused by ligature, for holding them tightly with a willow, or some other bandage.

There can be little doubt, on examining the cidest of the levels driven and the workings generally in this country, the former being extremely small and seems to surprising how they could have worked them all), that these hammers were used for the purpose of beating copper wedges or chis-1s, no doubt outsined and extracted from the ore of that metal): but it is equally evident, and I may any impossible, that any very large quantities of metallic ores could have been detached from the lodes at the date I am treating of—in fact, the workings only extended a small distance in length and a few feet deep on the richest portion of the lodes seen at surface, and it s

of the Komans at not finding silver mines to answer their expectations in that respect, for it is more than probable, acquainted as the Komans were with mining, and finding the silver and lead veins coming down to the margin of the sea on the coast of Carthagena, that they were smilient good gots to pronounce at once that coast of Carthagena, that they were not likely to encase veins of the precious metals. That the fame of the silver mines of Britain had spread far and wide amongst the Romans there can be no doubt, for Cicero, almost immediately after his disenbarkment of Caesar's troops, writes to his friends thus:—''Of one thing we are already certain, that there is not a grain weight of silver on that Island, nor the least prospect of plunder, but from the silves the time was be brought away.'' The account for this harly determination on the ground that the galant defence made by the the brave islanders put the Romans something out of humour with the country generally, and that' they had no great appetite to hunt up silver mines after such an unwelcome reception. From the time of the Romans, and for many centuries after, the principal mines in this part of Britain, and forermost amongst them the Esquir hir and Esquir frintilt, although not worked systematically, were very trains, after the Roman invasion was brought under cultivation, especially on the mountain hill tops, the pountation would naturally have an immense quantity of spare time at their command, and this, there can be no doubt whatever, was in a great measure devoted to the prosecution and working of the richest of the veins, by which they were enabled to meet the demands or claims made on them for the occupation of the land. From the nature of the veins—making rich ore at and near the surface throughout this county, and in no instance could this have been a width of from 60 to 90 for, to she grass sock, and as the ore made in soil bunches or rise of from 61 to 90 ft. to the grass sock, and as the ore made in soil bunches or its of from 61 to 9

of the mines from one bunch of ore ground up to from 70 to 100 tons per month. The mines have since changed hands on two or three occasions, each party having discovered rich course, of ore in different parts of the mines, and making returns of from 60 to 100 tons per month from very short bunches of ore.

I must now go shortly into what I would recommend doing to put the mine into a state of proper working, and permanent profits such as was achieved by Waller (70,500), per annum), and I may first remark that there is an excellent lot of machinery of all kinds on the mines to carry out what I shall recommend to be done, comprising an excellent and powerful steam-engine, two crushers, drawing, and dressing apparatus at Esgair-hir, and several water wheels, crushing, frawing, and dressing apparatus, the latter on the most improved principle, and an abundant supply of water at Esgair-firsith for working the same. It is not necessary for me to go into details of the machinery on the mines, or to give a list of them. Suffice it to say that they could not erected, together with the buildings on these mines, baracks for miners, office, &c., under a sum of 12,0004., but they are invaluable, as, if they had to be erected, it would cost you a loss of many years in the profitable working and the development of these mines. In addition to this, it is right to state that there is completed also what would take two years to carry on. This work can be made at once available for working the courses of ore under the present bottom, 30 fathoms. The Blue shaft having been sunk to a depth of 15 fathoms under the deepest workings at Esgair-hir, and in the centre of the great course of ore worked by Waller, and before reaching the main lode you will intersect the north lode, on which many hundreds of tons of rich lead ore was raised over the adit on tribute, and which has never been seen under, so that from these sources alone large returns can be immediately made, and lay open a very large quantity of profitable stoping ground.

Th

nd kept constantly going by as many men as can conveniently be put to work he same, so as to be driven into the great body of ore at the Esgair-bir workings, his adit would be continued on the north lode, which is standing almost whole throughout the entire distance of the mines, three miles on the course of the sides. The adit would be started at a very short distance from where in the adoling mine to the westward they are ruising and dressing lead ore at 32, per on. You will not expect me here to go into the details of a thorough working port. I have in this merely gone into matters generally, and I feel confident hat you cannot fall to open out these mines equally as profitable as they have for been, and that they will not be surpassed by any in this or the counties admining.—Geginan, March 27.

ABSALOM FRANCIS.

#### THE COAL TRADE.

J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports of coals into the port and district of London by sea, railway, and canal during March, 1877:—

	Ships.	Tons.		Tons c	
Newcastle			London & North-Western		16
Beaham					
Bunderland		69,026		62,311	2
Middlesborough	4	1,375	Midland	130,076	0
Hartlepool	83	27,170		46,294	16
Bootch	15	5,375	South-Western	3,092	6
Welsh	S	2,471			0
Yorkshire	12	2,144	South-Eastern	1.081	5
Small coal	19	1,944	Grand Junction Canal	301	10
Cinders					
Total	442	258,543	Total	403,477	15
Imports-March, 1876	3 538	294,851	Imports during March, 1876	484,812	2
			nent, 1876 and 1877.		
By Sea.	ships.	Tons.	By Railway and Canal.	Ton	S.
Jan. 1 to March 31, 187	7. 1519	905,143	Jan. 1 to March 31, 1876	1,329,6	598
			Jan. 1 to March 31, 1877	1,229,8	848
Decrease-1877	56	40,366	Decrease-1877	. 89,8	
Statement show	ing the d	ictribut	tion of coal imported into	the no	ter

of London, or brought within the Coal Duty limits, by railway canal, and afterwards exported coastwise or to foreign parts, or ser beyond limits of London district by rail or inland navigation, during

No. 1.—Railway-borne coal* No. 2.—Sea borne coal† No. 3.—Railway-borne coal† No. 4.—Sea borne coal† Total distribution of coal	Tons. 1877—tons. 21,087 147,158 63,732 202,611 31,818 115,635	207,504 191,273 78,785	Tons. 9,338 36,850	Tons. 60,346
Ditto, March, 18776	17,427 469,823 165,144 — through district in !	ransitu.	46,188	62,478
1 Brought into	port, and exported it	n same ships		
Brought into district, and	port, and exported in conveyed beyond li	n same ships mit of Coal I		
Brought into district, and	port, and exported in conveyed beyond the Statement, 1876 anuary 1 to March 3	n same ships mit of Coal I and 1877.	outy di	strict. . 486,113 . 469,823
Brought into district, and Comparative Total distribution of coal from	port, and exported it conveyed beyond li- e Statement, 1876 anuary 1 to March 3 1877	n same ships mit of Coal I and 1877.	Duty di	486,113 . 469,823
I Brought into  § Brought into district, an  Comparati  Total distribution of coal from Ditto, January 1 to March 31  Decrease in the present yea	port, and exported it conveyed beyond li- e Statement, 1876 anuary 1 to March 3 1877	n same ships mit of Coal I i and 1877. ii, 1876 and 1877. ring the pre-	99,850 40,360	486,113 . 469,823 . 16,290

Stocks in Europe :	Tons.
Chili ores and regulus, Liverpool & Swansea (equal to fine).	3,335
Chili bars in Liverpool	8,080
Ditto Swansea	2,430
Chili ingots in Liverpool	
Ditto Swansea	3,766
Foreign copper (chiefly Australian) in London	
English copper in London	50
Chili bars and Barilla in Havre	10,450
Other copper in Havre	450 = 28,563
Afloat and chartered from Chili to Europe (advised by mail):-	
Ores and regulus (equal to fine)	4,556
Bars and ingots	5,528*= 10,084
Affoat from Australia (advised by mail):-	0.010
Fine copper	2,612
Affoat and chartered from Chilito Europe (advised by cable) :-	0.000
Fine copper	3,200
Total	Tons 44,459

Of this quantity, 750 tons bars shipped to the United States are intended for anshipment to England.—Leadenhall-street, April 3.

HENRY R. MERTON AND CO. Values have ruled in favour of buyers, but the fluctuations have been trifling. On the 20th ult, the Wallaroo Company sold 454 tons in cakes at 761, 152, to 771, 58., average 771, 08, 74., and 58 tons in ingots at 771, 178, 64, to 781, at the same time 400 tons Burra Burra cake realised at public auction from 784, to 761, 28., 641, average 781, 78, 104, Charters from the West Coast, as advised by wire, were moderate—first half of March, 1100 tons, second half, 1400 tons. We quote Chili bars 711, 108, Wallaroo 781, Burra 781, 108, tong 177. Manufactured 814, to 844, Yellow metal 744, Ore and regulus 184, to 158, per unit. The innorts and exports for January and February were, by the returns of the Board of Trade—structure of the 1875.

IMPORTS.	1877.	1876.		1875.	
OreTons	10,078	 11,468	*******	4,770	
Regulus	4.739	 5,613	*******	6,010	
Copper	6,465	 5,905		7,942	
EXPORTS.					
Foreign raw	2,874	 2,515		2,029	
English raw	1,716	 1,566		1,580	
Manufactured, including yellow					
metal and brass	4,190	 3,530	*******	3,990	
London, Anril 3.		FRE	NCH AN	D SMITH	

#### THE TIN TRADE.

		Feb.	28.	Mar.	31.	Mar.	31,	Mar. 31
		1877		1877.		1876.		1875.
	Straits and Australian, spot Tons	8.045		8.380		6,400		4,547
	Ditto landing	564		635		325	*****	532
	Straits affoat	725	5	547		860		1,210
	Australian, affoat	2.750		2,500		2.159		2,390
	Banca, on warrants	1.047		1,470		853		1,040
	Ditto, Trading Co.'s hands. Ditto, afloat (by sailing ves-	1,065		393	*****	1,747		2,600
	sels only)	111	1	596		508		90
	Billiton, spot	1 121		1.099		912		1.097
	Ditto, afloat	1.200		1.100		1.000		800
	Australian tin in Holland	730		700	*****	1000	*****	-
			×			-		-
	Total Tons	17,386		17,260	*****	14,762	*****	14,306
	Deliveries during the month in							
	'London	717		756		1,194	,,,,,,,	860
	Ditto, Holland	712	******	514	*****	380	******	659
	TotalTons	1,439	dato	1,270	E	1,574	*****	1,519
	Prices of Straits	£72 Mare	ch	£70 10	Τ	Ons	7501	£89
	Ditto, Australia,	ditt	o	fing	Duri	ng fire	t D	uring fi
R	hinments from Straits to London T	ons	5,227		1	,320 .	*******	2,11
ĕ	hinments from Australia to London		6.989		2	.171 .		1,94

m. April 3. There has hardly been any change in our tin market during this

9,559 ..

foreign tin in London

rule continue unwilling to meet the market, and there being no speculators for a further decline, business has necessarily been restricted to purchases for immediate wants. It cannot be denied that the immense stock in London, and the continued large supplies coming forward, do weigh heavily on the market. The Dutch Trading Company's second Banca sale in 1877 took place on the 28th inst., when the 28,518 slabs were sold at from 42½ fit. od 3ft, average 42½ fit. The next sale will be held towards the end of May. Banca, with small sales, at 3ft, lower bids being frequently refused. Very little business has been done for delivery ex March sale. Since the sale small lots have found buyers at 42½ fit. Billiton; The tenacity of holders has rendered business in this description well nigh impossible. In the beginning of the month 42 fit. was accepted for several parcels on the spot and to arrive, similar bids having since been refused. There are now buyers at 4½ fit. to 41½ fit. On April 9 a public sale comprising 10,000 peculs Billiton will take place at Batavia.

The position of Banca tin in Holland on March 31, according to the official returns

the position of Banca tin in Holland on	March	31, acco	rding to	theom	cial retur	Œ
the Dutch Trading Company, was-	1877.		1876.		1875.	
Import in March Slabs	2.111		2,902		_	
Total three months	36,191		11,024	********	9,819	
Deliveries in March	10,040	*********	5,916	*******	12,775	
Total three months	30,371	*******			27,759	
Stock second-hand	47,018		27,300	********	10,437	
Unsold stock	12,673				106,840	
Total stock	59,691		82,760		117,277	
AfloatPeculs	8,425		8,100	*******	1,500	
Statement of Billiton						
Import in March	3,100	*******	2,800	*******	6,099	
Total three months	21,547		22,679	*******	16,349	
Deliveries in March	5,927	********	8,652		8,323	
Total three months	22,652	*******	23,410	*******	18,000	
Stock	29,514		28,948		29,955	
AfloatPeculs	13,000		14,000		8,000	
Quotation ) Banca	4214 fl.		491/4 fl.		52 1/2 11.	
March 31 ( Billiton	411/4		46		51	
ese combined returns of Banca and B	illiton f	or 1877	, compa	red wit	h those	0
6, exhibit-A decrease of the import	for Ma	rch of	5 tons;	an incr	ease of t	h

import for the three months of 752 tons; an increase of the deliveries for March import for the three months of 752 tons; an increase of the deliveries for the three mouths of 296 tons; an increase of the stock second hand of 834 tons; a decrease of the unsold stock of 13:7 tons; a decrease of the total stock of 703 tons; a decline of the quotation of Banca of 11/1.13s, per ton. The Government returns for the months of Docember and

		D	ecen	ber.		HOLLA:		J	inua	ry.	
	1876		1875		1874		1877.	. 1876.		1	1875.
Germany Tons	272		355		298		237		171		217
England											
Belgium	166		114		109		192		79		85
France	56		22		45	*********	53		10	*****	24
Hamburg	53		36		60	**********	25		23		12
United States	-		9		44		27		2		-
Other countries	16		_		10		4		3	*****	4
	-								-	,	-
Total	565		553		588		557		295		355
Rotterdam, March 31.				_	-	E	BELL	Vii A	ND F	LAVE	LAAI

1877				1910"		1010.
Mar.	1.	April	1.	April 1	١.	April
8,622		8,990		6,725		
1,048		1,469		853		
1,010	***	912		905		935
780		500	***	875		
2,200		2,100		2,000		
1,000						
945						
111	***	526	***	5:0		90
15,716		15,715	***	14,465		13,254
		F	DE:	NCH AN	D S	MITH.
		-				
	Mar. 8,623 1,048 1,010 780 2,200 1,000 945 111	8,622 1,048 1,010 780 2,200 1,000 945 111	Mar. 1. April 8,623 8,990 1,048 1,449 1,010 922 780 500 2,200 2,100 1,000 812 945 398 111 526 15,716 15,715	Mar. l. April I. 8,622 8,090 1,048 1,449 1,010 922  780 500 2,200 2,100 1,000 812 945 396 111 526 15,716 15,715	Mar. I. April I. April I. 8,622 8,990 6,725 8,1048 1,449 853 1,010 922 905 780 500 815 2,400 2,100 2,100 1,000 812 875 945 394 1,733 111 828 500 15,716 15,715 14,445	Mar. I.         April I.         April I.           8,622         8,090         6,725           1,048         1,449         853           1,010         922         905           780         500         875           2,200         2,100         2,00           1,000         812         875           945         396         1,733

#### FOREIGN MINING AND METALLURGY.

FOREIGN MINING AND METALLURGY.

There is little fresh to report with respect to the French coal trade; the situation remains practically unaltered. It is difficult, indeed, to say what is likely to bring back the activity which has disappeared from the trade. It will not do to reckon any further upon the sugar-producing season, and the winter is at an end, although an occasional frost or two may occur during April. The trade may be said to enter upon the summer season with abundant and complete supplies and stocks which have lost all their elasticity, so that no serious change can be anticipated in prices before October—that is, before the opening of next winter. The French Legislature has appointed a commission to report upon the best means of preventing explosions of fire-damp. The Bonne Esperance Collieries Company has been paying a dividend of 11. 2s. 6d. per share for 1876.

Serious attention is being given in Belgium to the question of a

Serious attention is being given in Belgium to the question of a serious attention is being given in Beginn to the question of at canal from Mons to Charleroi, and to the enlargement of the canal from Charleroi to Brussels. The Minister of Public Works has re-ceived a numerous deputation upon the subject, and he promised to give the question careful consideration. It is to be hoped that the result will be that satisfaction will be given to all concerned. The Belgian coal trade remains in much the same condition, and all that coalowners can do is to wait. The trade does not present the least interest; either as regards appraision or prices, and it is of little use interest, either as regards animation or prices, and it is of little use

to allowhers either as regards animation or prices, and it is of little use to dwell upon small isolated facts.

The revival in the French iron trade, which is usually noticed in the spring, has presented comparatively little importance this year. Prices do not improve, and the future does not hold out any prospect of additional strength. Nevertheless, working operations are being carried on tolerably well, the rolling-mills do not want work, and small orders are being received from day to day. Pig remains feeble; Luxembourg pig, for instance, does not make more than 33s. 6d, per ton. Both the imports and exports of iron into and from France declined in the first two months of this year, as compared with the corresponding period of 1876. It appears from a statement issued by the Committee of French Forgemasters that the orders for iron rails given out in France last year amounted to 58,000 tons, showing a decrease of 39,000 tons as compared with 1875. On the other hand, steel rails were ordered last year in France to the extent of 130,000 tons, or 10,000 tons more than in 1875. The final diminution in the consumption of rails in France last year will be seen to have been only 29,000 tons. Contracts for 13,000 tons of that diminution in the consumption of rails in France last year will be seen to have been only 29,000 tons. Contracts for 13,000 tons of steel rails have been recently let in France at 8t. 11s. 2d. to 8t. 11s. 4d. per ton. The North-Eastern of France Railway Company has purchased 3000 tons of iron rails at 6t. 16s, per ton. It is stated that Mr. Bessemer has appealed from a judgment delivered by the Tribunal of Valenciennes in connection with proceedings which he had commenced against the Denain and Anzin Steelworks Company in respect to two life to be raid to him in convention with the mean. respect of royalties to be paid to him in connection with the manufacture of steel.

The Belgian iron trade remains in a very feeble condition. The Belgian iron trade remains in a very feeble condition. Two important contracts for iron bridges have just been let in Italy. The bridges in question are proposed to be thrown over the Felia and over the Serchio; the first is 550 ft. in length. A Belgian concern—the Willebroeck Construction and Workshops Company—tendered for the execution of both these bridges, but with less success than when it tendered on a recent occasion in Spain. M. de Soignie, a Belgian forgemaster, has obtained a contract for 320,000 bolts, cramps. &c., for the Saragossa, Pampeluna, and Barcelona Railway; he hopes also to obtain a contract for 4000 tons of steel rails for the same company, having undertaken to guarantee the rails delivered by him for eight years, instead of five years, as proposed originally by the Cablier des Charges. The Russian Governposed originally by the Cahier des Charges. The Russian Government has been devoting attention more and more to the best meanof encouraging the manufacture of locomotives and railway plant In future all the Russian railway companies are to be required to purchase their rolling stock in Russia. Premiums are to be given by the Russian Treasury upon locomotives built at Russian works to the order of Russian railway companies. These premiums are-for a four-wheeled engine, 2400 roubles; for a six-wheeled engine 2600 roubles; and for an eight-wheeled engine, 3000 roubles.

2500 roubles; and for an eight-wheeled engine, 3000 roubles. A Belgian writer, commenting upon this policy, suggests that it might be well for Belgian capitalists to set up mechanical works in Russia. Transactions in copper at Paris have exhibited no increase of activity. Chilian in bars has made 76l.; ditto, ordinary descriptions, 73l.; ditto in ingots, 77l.; English best selected, 78l.; and pure Corocoro minerals, 76l. per ton. The demand upon the German markets has been rather more active. The Paris tin market has been returned to the property of the property of the paris tin market has been without animation. Banca has been quoted nominally at 78*l*.; been impossil Straits and Billiton at 77*l*.; Australian at 75*l*. 18s.; and English at also to have a 76*l*. per ton. Banca has been quoted nominally at 43 fl., and Billiton shareholders.

at 42 fl. at Rotterdam. Upon the German markets in lar rather a better tone. The Paris lead market has been French lead is worth 21L, and lead from other sources, ton. The German lead markets have been rather feels gine has made 21L 16s. per ton at Paris with deliver Rolled Vieille Montagne zinc has brought 30L 16s. per seilles. There has not been much doing in zinc upon markets; nevertheless, prices have been tolerably well.

#### THE SCOTCH MINING SHARE MARKET-WEELING AND LIST OF PRICES.

AND LIST OF PRICES.

During the past week, owing to the Easter holidy the vening, business has been literally at a stop. In shared while Ebbw Vale are 5s. lower. Benhar have improved old shares, while 1s. 9d. less has been accepted for the stop old shares, while 1s. 9d. less has been accepted for the stop old shares, while 1s. 9d. less has been accepted for the stop old shares, while 1s. 9d. less has been accepted for the stop old shares, while 1s. 3d.; Mersey, 25s. dis.; Scottish has 37s. 6d., buyers; Sheepbridge (new), 104; Skerne, 64; the 12½; West Cumberland, 9; Workington, 15. In shares, copper concerns, Cape have improved 10s., and Thasis while Huntington are 1s. 6d. lower. Yorke Peninsals at are 5s. to 10s. In shares of home mines, Glasgow as are 5s. to 10s. In shares of home mines, Glasgow, and Thasis are 5s. to 12. Leadhills, 6½; Parys Mountain, 8s. to 10s; luck 20½ to 21; Leadhills, 6½; Parys Mountain, 8s. to 10s; luck 42s., 6d.; Wheal Grenville, 22s. 6d. to 27s. 6d.

In shares of gold and silver mines Richmond have falled while Flagstaff have improved to a similar extent, and summinal, at last prices. Colorado Terrible Lode are 4% shards. 8½; South Aurora, 6s. 6d.; St. John del Rey, 20 to shares of oil concerns Young's Paraffin are raised 1s. 4, which have 6d. down. Runcorn Soap and Alkali remain the same in demand. at 1s. 3d. advance, while the old demand.

bank are 6d. down. Runcorn Soap and Alkali remains in In shares of miscellaneous companies Scottish Wagon (nerb are in demand, at 1s. 3d. advance, while the old shares are in the demand, at 1s. 3d. advance, while the old shares are at 11\frac{1}{2} to 11\frac{1}{2}. London and Glasgow Engineering, & at last week's price (27), but holders ask an advance of a reports of a decided improvement having set in for the Charlest in the companies Langdale's are quoted 75s. to 80s.; Laws, 6 st. Newcastle, 60s. to 65s.

Companies Langdale's are quoted 79s, to 80s; Lawes 60s. Newcastle, 60s, to 65s.

EMMA SILVER MINING COMPANY (Limited).—A mess this company. There was a large attendance. Full and as accounts were given of the position and prospects of the going on in the United States Courts against Mess. It shall be successed to the company. There was a large attendance of the made it appears that the directors are assured, both by the success for the made it appears that the directors are assured, both by the success for the success are very encouraging if the rible prosecuted to a conclusion. The following resolutions were proposed outly carried:—(1) That this meeting approve of the proceedings along the recovery of the success are very encouraging if the rible by the directors in prosecuting Messrs. Park and Batter in the factors, and, with the view of providing funds to carry on the trial use to exceed the construction of the subscribe to the new issue of debentures of 10. and timely to recommend the other shareholders also to subscribe to the debentures. It is, perhaps, as well the foregoing is one side of the question, as other reports are far from the success of the law proceedings. However, there seems to be a now but to support the carrying on of the trial, or lose all without and the subscribe to the deventures. It is, perhaps, as well the foregoing is one side of the question, as other reports are far from Subjoined are this weak's quotations, &c., of mining and meal than the Scotch Stock Exchanges:—
Capital. Dividends.

_		-				cen	
Per		Paid	1	per	anı	nm.	
share		up.	P	revio	us.	Last	COAL, IRON, STEEL.
£10		£7		£ 81	12	£ 81	Arniston Coal (Limited)
10		10		9		6	Benhar Coal (Limited)
10		8		9		6	Ditto
100		45		354	.11	Sayd.	11. Bolckow, Vanghan, and Co. (Lim.) 1
10		10		10	***	10	Cairntable Gas Coal (Limited)
10		10		nil		4	Chillington Iron (Limited)
33		29		nil		mil	Ebbw Vale Steel, Iron, and Coal (Lim.)
10		5		mil		nil	Fife Coal (Limited)
10		10				****	Glasgow Port Washington Iron & Cool 1 a
10	***	10	***			-	Ditto Prepaid
10	***		***	_	***	_	
10	***	10	***	nil	***		Lochore and Capledrae (Limited)
10	***	10	***			-11	Marbella Iron Ore (Limited)
10	***	10	* * *	nil 5	* * *	nil	Monkland Iron and Coal (Limited) a
	***		***		***	4	Ditto Guaranteed Preference 1
100	***	100		mil	106	nil	Nant-y-Glo & Blaina Ironworks pref. (1) 2
6	***	0.5	5	nil	200	nil	Omoa and Cleland Iron and Coal Lin. &
1	***	1	***		5	175	6 Scottish Australian Mining (Limitel) _ 4.
. 1	* * *	58			2	175	4 Ditto New
tock		100	***	5		mil	Shotts Iron
							PPER, SULPHUR, TIN.
4	1.00	4		mage		-	Canadian Copper Pyrites (Limitel) à
10		7		208	1	20s	Cape Copper (Limited)
1		1	1.00	15	***	-	Glasgow Caradon Copper Mining (Lin.). 3
1		159		1.5		-	Ditto New
10		9%	í	nil		nil.	Huntington Copper and Sulphur (Lim., At
259.		23s.		-		Second	Kapunda Mining (Limited) &
4		4		-	***	100.00	Panulcillo Copper (Limited) &
10		10		61		61	Rio Tinto (Limited) 1
20		20		anne.	***	7	Ditto, 7 per cent. Mortgage Bonds W
100		100		maps:	***	5	Do., 5 p.ct. Mor. Deb. (Sp.Con. Bis.) 4
10		10		mil		nil	Russian Copper (Limited) a
10	***	10	***	25			Tharsis Copper and Sulphur (Limited) 200
10		7		25		225	Ditto New
1	***	1	***			400/	Yorke Peninsula Mining (Limitel) 10
î		1					Ditto, 15 per cent. Guaranteel Prel las
*	***	^			***	-	
							GOLD, SILVER.
1		1	***	-	***	5	Australian Mines Investment (Limited). At
20		20		*****		-	Emma Silver Mining (Limited) All
10	***	10	***	-	***	-	Flagstaff Silver Mining (Limited) %
6		5			* K +	-	Last Chance Silver Mining (Limited) = M
5	***	5	7	8. 64	27	9. 6d	Richmond Mining (Limited)
							OIL.
10		7		5		6	Dalmone Oll (Timited)
1		i		*****	***	71	/ Oakhark Oil (Limited)
î	***			-	***		
10		10	***	_		21	Uphall Mineral Oil (Limited) "A"
10	***	10	***		***	47	Ditto "B" Deferred
10				5	* * *		Young's Paraffin Light & Mineral Oil (L. )
TA	MAK	0 %	á	0		9	
							MISCELLANEOUS.
50		25		10		5	London and Glasgow Engineering & Ires
	***	-		-		-	Shiphydding (Limited)
20	***	145	6	_		-	
10	***	10	3	6	***		Scottish Wagon (Limited)
10	***	4	***	6	***	6	Ditto New
LU	***				nter		Per share.
		T		don	for	6.5×60	account, April 9; settling day, April 12.
			reto t	any	101	WEREN !	account, April o, secting dejing
_							J. GRANT MACLEAN, Stock and Share Bris.
Pos	10	fice.	Bui	lding	18, 8	tirli	ng, April 5.
						_	
						_	

A MODEL LIQUIDATION.—The report of the liquidator Western Bank of Scotland is, in its way, a model document fact, every charge, and all particulars of calls and pays forth with the utmost clearness, so that those interested either as creditors or shareholders, can have no difficulty every penny of the money involved in the liquidation, has been in process of liquidation for 19 years, and at the last year there was an undistributed surplus of 10,776, all 1915t, in the shape of expenses; including four years in salary, inspectors' fees, and law charges for closing the in the shape of expenses; and the over the remain assets and liabilities, amounting to year small sums, so assets and liabilities, amounting to very small sulliquidators' task is at an end. After deducting an the committee and a small sum for contingencies, the surplus to allow a final return to the sharehold the committee and a small sum for contingencies, the surplus to allow a final return to the sharehold the committee of the sharehold the share. During the 19 years through which the liquids liabilities to the amount of 6,134,405. have been paid the amount of 125*l*. per share have been made on the yielding 2,054,566*l*, of which 877,177*l*, has since been results. total expenses of liquidation have amounted to 118/14, 1703. has been paid as salaries and 57.7871 as law expensed with what is known of English liquidation. character, is remarkably moderate; and when it is the loss on the recovery of the assets of the bank h than 2,826,000l., it is obvious that the liquidation mi conducted with great judgment and care. Otherwise It was been impossible for the liquidators to have paid all expess also to have returned nearly two-fifths of the calls made up TH TARRY

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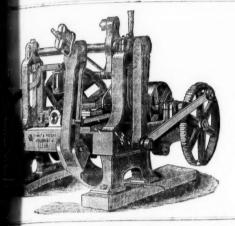
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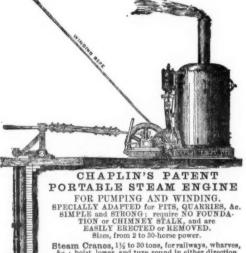
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FORM OF "TACK NOTE."—UNDERTAKING TO GRANT MINE LEASE. 18.

MINING JOURNAL CASES, TO HOLD ONE MONTH'S NUMBERS. 38. 64.

VENTILATION OF COAL MINES. 34.

THE MINERS' ASSOCIATION OF CORNWALL AND DEVONSHIRE—PAPERS ON PRACTICAL MINING. 18.

drau

PUMPS



PARIS INTERNATIONAL EXHIBITION, 1867.



VIENNA INTERNATIONAL EXHIBITION, 1873.



LONDON INTERNATIONAL EXHIBITION, 1874.



CORNWALL POLYTECHN SOCIETY, 1867 and 1877

#### TANGYE HOLMAN BROTHERS AND

10, LAURENCE POUNTNEY LANE, LONDON, E.C., AND BIRMINGHAM, (TANGYE BROTHERS), CORNWALL WORKS, SOHO.

# The "SPECIAL" DIRECT-ACTING STEAM PUM

Holman's Patent Self-acting Exhaust Steam Condensers.

# UPWARDS OF 12,000 "SPECIAL" STEAM PUMPS ARE

After eight years of successful application for all purposes to which steam-driven pumps can be applied, THE "SPECIAL" STEAM PUMP STILL MAINTAINS THE FIRST POSITION IN THE MARKET, notwithstanding that it alone-of all direct-acting pumps-has been subjected to the great variety of severe tests that must be encountered in such a period of time. Some valuable improvements have been suggested in the course of a long experience, and their adoption has rendered the apparatus at once the simplest and most certain in action. There is absolutely no extraneous gear, and the steam cylinder is no longer than the pump. The valves are of easy access, and are suited for pumping fluids and semi-fluids of almost any

## Holman's Condenser

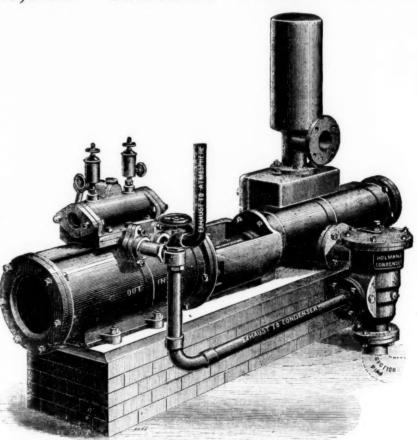
TURNS WASTE STEAM INTO GREAT POWER.

SAVES HALF ITS COST IN PIPES AND CONNECTIONS.

PREVENTS ALL ESCAPE OF STEAM IN MINES OR ELSEWHERE.

REQUIRES NO EXTRA SPACE.

SAVES TWENTY TO FIFTY PER CENT. OF FUEL.



WILLIAM ELLIOT, Esq., of the Wearder and Coal Company, writes under date & 1875, as follows: - "We have now THIRTH of your SPECIAL STEAM PUMFS in one at the various collieries under my chargeof them employed pumping waterout of a to the depth of 50 fms.—others employed; pits, and a good many feeding Boilers I no hesitation in saying that we have found the Cheapest and Best Pumps of the have tried. I can with confidence recom them to intending purchasers."

Messrs. Burt, Boulton, and Harry Chemical Manufacturers, of London. FORTY of the "SPECIAL" STEAM POR use at their works.

## HOLMAN'S CONDENSER

Are made to suit any size and kind of Sa Pump. They form a part of the suction of the Pump, and while they effectually dense the exhaust steam they produce as rage vacuum of 10 lbs. per square inch a steam piston, increasing the duty of the h and effecting a saving in fuel of from In

In Mining operations these Condenses be of great value.

All Boiler Feeders are recommended fitted with these Condensers, as not only exhaust steam utilised in heating t water, but is returned with it into the bu

Blake

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#### REDUCTION PRICES GREAT

							Ine /	Media Bu	g sizes	are sui	tittote J	or tout	estics	mean	um cif	4 .										
Diameter of Steam CylinderIn	. 3	4	4	4	5	5	5	1	6	6	6	7	7	7	7	7	8	8	8	8	8	9	9	9	9	9
Diameter of Water Cylinder In	. 1	1 2	3	4	3	4	5	:	3 4	5	6	3	4	5	6	7	4	5	6	7	8	5	6	7	8	9
Length of Stroke In	. 9	9	9	9	12	12	12	1:	2 12	12	12	12	12	12	12	12	12	12	12	12	18	12	12	12	18	24
Gallons per hour	680	815	1830	3250	1830	3250	5070	1830	3250	5070	7330	1830	3250	5070	7330	9750	3250	5070	7330	9750	13,000	5070	7330	9750	13,000	16,500
Price of Special Pump £	16	18	20	25	2210	27 10	32 10	25	30	35	40	30	35	40	45	50	40	45	50	55	65	50	55	60	70	85
Extra, if fitted with Holman's Condenser and Blow-through Valve	£7	£7	£9	£11	£8 10	£11 10	£12 10	s £9	£12	£15	£15	£10	£13	£15	£ 16	£22	£13	£16	£16	£22	£-)-)	£16	£16	£23	£24	£35
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Diameter of Steam CylinderIn.	10	10	10	10	12	12	12	12	12	12	14	14	1	14	14	14	1	4	16	16	16	16	1	6	18	18
Diameter of Water CylinderIn	7	8	9	10	6	7	8	9	10	12	7	8	3	9	10	12	1	4	8	9	10	12	1	4	9	10
Length of StrokeIn	12	18	24	24	18	18	18	24	24	24	24	24		24	24	24	2	4	24	24	24	24	2	4	24	24
Fallons per hour 9	750 1	3,000	16,519	20,000	733	0 9750	13,000 1	6,519	20,000	30,000	9750	13,00	00 16,	519 2	0,000	30,000	40,0	00 13	,000	16,519	20,000	30,000	40,0	00 16,	519 20	0,000 3
Price of Special Pump£	85	75	90	100	mt	80	-	110	120		110	spinstern spinster			140	-	-				160					90
Extra, if fitted with Holman's Condenserand Blow-through Valve	23	£24	£35	£35	£20	£27	-	£38	£38	£50	-	£28	-		£40	£55	£5.	-	-	£ 40	£40	£55	-		45	£45 £

Intending purchasers of Steam Pumps would do well to observe the great length of stroke, short steam cylinder, and short piston of the "Special" Steam Pump, as compared with the short stroke, long steam cylinder, and short piston of the "Special" Steam Pump, as compared with the short stroke, long steam cylinder, and short piston of the "Special" Steam Pump and durability of the machine, and the space occupied by same, greatly depend upon this. The advantage of long strokes will be obvious when purchasers are reminded that each stroke delivery valves of a "Special" Steam Pump with only 6 in. stroke, running at 120 ft. per minute, as against 120 times per minute, as against 120 times per minute in a Pump with only 6 in. stroke performing same dury.

The "Special" Steam Pump can be worked by Compressed Air as well as by Steam.

HINDREDS of these PUMPS are USED for HIGH LUTE IN MINUTES IN MIN

HUNDREDS of these PUMPS are USED for HIGH LIFTS IN MINES, for which purpose they are made with 21, 24, 26, 28, 30, and 32-inch Steam Cylinders, and 36 48 and 72-inch Steam

The following Testimonial gives one Example of the Power Gained by the action of Holman's Patent Condensers:-

Meers. TAYGYE BROTHERS AND HOLMAN.

NORLEY COLLERY, WIGAN.

Mears. TAYGYE BROTHERS AND HOLMAN.

Granter pleasure in recording my entire satisfaction with a working of the Holman's Patent Steam Pump Condenser commences working automatically, and maintains a constant vacuum gauge on the exhaust pipe indication of the Mining Engineer. When we start the "Special' Steam Pump the aworking of the Holman's Patent Steam Pump Condenser commences working automatically, and maintains a constant vacuum gauge on the exhaust pipe indication of the Mining Engineer. When we start the "Special' Steam Pump the aworking of the Holman's Patent Steam Pump Condenser commences working automatically, and maintains a constant vacuum gauge on the exhaust steam from the Condenser commences working automatically, and maintains a constant vacuum gauge on the exhaust steam from the Condenser commences working automatically, and maintains a constant vacuum gauge on the exhaust steam from the Condenser commences working automatically, and maintains a constant vacuum gauge on the exhaust steam from the Condenser commences working automatically, and maintains a constant vacuum gauge on the exhaust steam from the Condenser commences working automatically, and maintains a constant vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the Enature in the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust steam from the Condenser vacuum gauge on the exhaust st

NORTH OF ENGLAND HOUSE ... ... TANGYE BROTHERS AND RAKE, ST. NICHOLAS BUILDINGS, NEWCASTLE-ON-TYNE.

TANGYE BROTHERS AND STEEL. Tredegar Place. NEWPORT. Mon.; and Oxford Buildings, SWANSEA.

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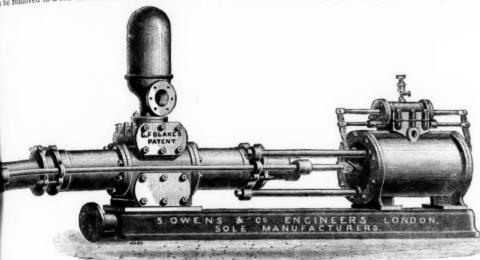
# AKE'S PATENT STEAM PUMP.

MORE THAN 10,000 IN USE.

# OWENS & CO.,

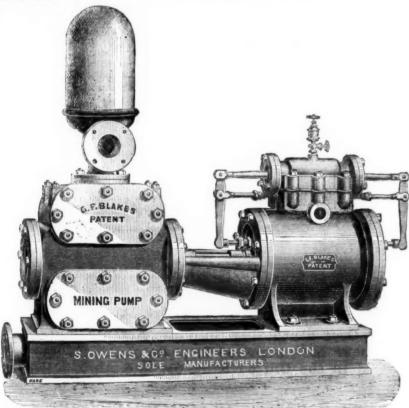
vdraulic and General Engineers, Whitefriars-street, London; And at 195, Buchanan-street, Glasgow (W. HUME, AGENT).

PUMPS from their SIMPLICITY, RELIABILITY, DURABILITY, and ECONOMY are SPECIALLY SUITED FOR MINING SES, where large quantities of water require to be raised from great or medium depths with CERTAINTY. They are set in their construction, throwing a constant stream of water, can be made of any stroke to suit the space in which they work, can be arranged with any combination of steam and water cylinders to suit the pressure and lift against which it is to work them, are made of the very best materials and highest class of workmanship, and all working parts can be readily yany ordinary workman, and replaced if necessary by a duplicate part (all such being interchangeable) in the shortest posme. For situations where gritty and sandy water has to be pumped the DOUBLE-PLUNGER PATTERN is recommended. These is limited the PISTON PUMP is better suited, a novel feature of which is the PATENT REMOVEABLE LINING, and be removed in a few minutes and substituted with a new one, without disturbing any other part of the pump.



### Blake's Improved Double-plunger Steam Pump. S. OWENS AND CO.,

agithe BLAKE STEAM PUMP before the mining world, believe they are offering the BEST, MOST RELIABLE, and MICAL PUMP that has yet been made, and solicit an inspection of various sizes in operation at their works, White-net, Fleet-street, London.



Blake's Improved Mining Pump, with Patent Removeable Lining to Pump Cylinder,

nation of these Pumps may be had to suit circumstances. The following are some of the sizes suitable for Mining

of stam cylindersin. of water cylindersIn. in a stroke In. if strokes per minute. ity in gallons porta-	18	200		0		67	24	24	16 5 24 22	24	24	18 4 24 22	30	18 6 30 22	18 8 30 22	20 5 30 20	7 30	8 36	20 9 36 17	24 6 36 17	24 8 42 15
in gallons por l	00	90	00	30	25	25	25	22	22	22	22	22									
Tapproxmately }	1440	2610	4200	5940	2940	4620	6600	2646	4158	5940	10620	2646	5160	7500	13260	4586	9000	12360	15060	6720	12000

FOR THE ABOVE, OR ANY SPECIAL SIZE, AND ILLUSTRATED CATALOGUES FURNISHED ON APPLICATION

PATENT CONDENSERS

plied for any size pump to effect a saving of fully 30 per cent. in the consumption of fuel, greatly increasing their efficiency

The Blake Pump will work under water, and as efficiently with compressed air as with steam.

BLAKE'S DONKEY PUMPS FOR FEEDING BOILERS KEPT IN STOCK.

PATENT

# "INGERSOLL ROCK DRILL,"

LE GROS AND CO.,

60, Queen Victoria Street, London, E.C. 5, PARK PLACE, NEW YORK, U.S.A.



durability, &c.

"4.—The steam or
air cushions at each end of cylinder effectually protect from injury.

"5. Its having an automatic feed, giving it a steady motion, &c.

"6. Its greater steadiness and absence of jar and vibration ex-

perienced in other drills, which is very destructive to their working

parts, &c.

"7. Its greater power is some FORTY PER CENT. in favour of the Ingersoll."

Medals awarded for several years in succession "For the reason that we adjudge it so important in its use and complete in its construction as to supplant every article previously used for accom-

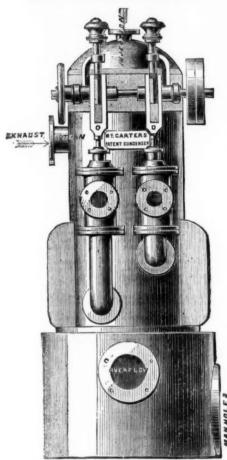
plishing the same purpose."

Estimates given for Air Compressors and all kinds of Mining Machinery. Send for Illustrated Catalogues, Price Lists, Testi-Machinery. Send for monials, &c., as above.

LICENSED MAKERS.

#### KIRK, RAMSDEN, AND CO. (LIMITED)

HUDDERSFIELD.



These Condensers car be placed inside or outside of the enginehouse. They draw their own injection water, and require no foundation. Specially adapted to Pumping and Winding Engines, effecting a saving from 20 to 30 per cent. in coal, and increases the power of the Engine.

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Makers of Pumping, Winding, and Blowing Engines, Condensing and Non-condensing.

Horizontal and Beam Engines for all purposes.

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They clear from the system all hurtful impurities, promote appetite, aid digestion, purify she blood, and keep the bowels regular. PERSON'S SUFFEE.
ING from HEADACHE, Liver Complaints, Pains in the Shoulders and the Back,
Gout, Rheumatism, and General Debility are particularly recommended to try



They have never been known to fail in affording immediate relief.

#### BREAKER BLAKE'S NEW PATENT STONE R. MARSDEN,

ORIGINAL PATENTEE, AND ONLY MAKER IN THE UNITED KINGDOM.-2000 IN

These Machines are in extensive use amongst the Tin, Copper, Lead, and other Mines, and are showing a clear saving of 4d. and 6d. per ton over the ordinary mode of hand spalling being tion of stamping power equal to 30 per cent., which is a considerable saving. They are already well known to the mining world, and can be seen in operation at some of the leading Commission. For breaking the elvan rock they have established a decided supremacy over other Machinery. Used by all the Green

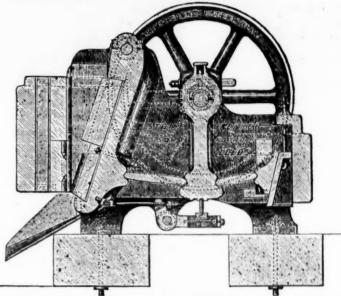
Exclusively adopted by Her Majesty's Government, and by most Continental Governments.

Machines for Hand and Steam Power, specially designed and largely used for Crushing Pyrites, Limestone, Cement, Coal, Rocks, Ganister, &c., at all the principal works in the Kingdom.

EXTRACTS FROM TESTIMONIALS.

"They occupy an important position as labour-saving Machines."—drohtect.

"The Machine is well designed, simple, but substantially made, and is capable of reducing any material to fine gravel, such as copper ore, and is certainly preferable to the stamps in use for that purpose."—Mining Journali.
"Your Machine will crush from 60 to 120 tons of hard limestone per day of 10 hours."



This illustration shows my new patent REVERSIBLE Cubing Jaws, which are made in upper and lewer sections, and the backs planed, so that when the bottom part of the lower section becomes worn it can be turned upside down, and thus made equal to new. This process does not require the aid of skilled labour, the white read being extinctly discovered with.

white metal being entirely dispensed with.

THRSE JAWS WILL WEAR FOUR TIMES longer than any other, and they can be renewed at a fractional cost. CATALOGUES, TESTIMONIALS, &c. (in the French or German language, if required), on application to the sole maker of "Blake's "Stone Breaker:

"No Machine is equal to yours, combing great power, simplicity of construction, and single and appreciated that it is unnecessary for at some traction or speak of their merits.—Engine 'By the use of your Machine we have reducting and forming road material to one half its work. Our 16 by 7 Machine has broken 4 tone the 20 minutes for fine road metal, free from dan."

Mining Companies in

World, and are show

Testimonials to effect

Saving of FIFTY per

Awarded 62 Gold and

Paris, 1867. Santiago, 1869.

Leeds, 1875.

Cardiff, 1872.

Bolton, 1872. Ayr, 1873-4-5-6, &c.

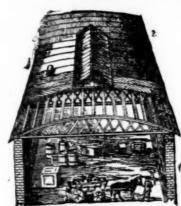
Leicester, 1868.

over every other system

Medals:-

MARSDEN, SOHO FOUNDRY, LEEDS, ENGLAND.

#### M'TEAR AND CO.'S CIRCULAR FELT ROOFING.



GREAT ECONOMY CLEAR WIDE SPACE.

For particulars, estimate

M'TEAR & CO., ST. BENET CHAMBERS. FENCHURCH STREET, LONDON, E.C.:

4, PORTLAND STREET MANCHESTER:

OR CORPORATION STREET, BELFAST.

The above drawing shows the construction of this cheap and handsome reof, now nuch used for covering factories, stores, sheds farm buildings, &c., the principal of which are double bew and string girders of best pine timber, sheeted with ½ inboards, supported on the girders by purifix running longitudinally, the whole being covered with patent waterproof roofing felt. These roofs so combine light sees with strength that they can be constructed up to 100 ft, span without centre supports, thus not only affording a clear wide space, but effecting a great saving both in the cost of roof and uprights.

They can be made with or without top-lights, ventilators, &c. Felt roofs of any description executed in accordance with plans. Prices for plain roofs from 30s, to 0s. per square, according to span, size, and situation.

Manufacturers of PATENT FELTED SHEATRING, for covering ships' bot tams under copper or fine.

tams ander copper of rinc.

DRY HAIR FELT, for deadening sound and far sovering steam pipes, thereby saving 25 per cent. in fuel by prevening the radiation of heat.

PATENT ASPHALTE ROOFING FELT, price ld. per square foot.

Wholesale buyers and exporters allowed liberal discounts.

PATENT ROOFING VARNISH, in boxes from 3 gallons to any quantity required 8d. per gallon.

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# BRYDON AND DAVIDSON'S ROCK DRI

SELECTED BY THE BRITISH AND OTHER GOVERNMENTS.

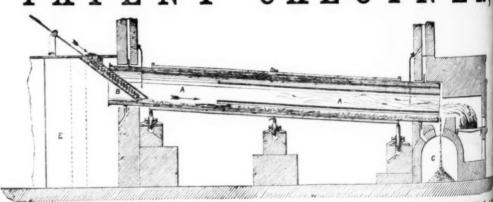
Reduced prices of this Rock Drill (formerly called "Kainotomon"), Nos. 1 and 2, £32 and m SUBJECT TO DISCOUNT.

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Makers of Pumping and Winding Engines, Steam Hamm Boilers, Pump Pipes, &c., &c. Castings of all kinds

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For Roasting Ores containing Sulphur, Arsenic, and other Vold Matters, have been supplied to some of the principal Mines in the United Kingdom and Abroad.

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NEAR VICTORIA STATION, MANCHESTER.

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JOHN STANIAR AND CO., Manufacturers by STEAM POWER of all kinds of Wire Web, EXTRA TREBLE STRONG to

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